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REDPOLL.

Length, 5.30 inches. *Adult male*, crown bright red; back brownish black and grayish; throat black; under parts white, streaked with black; breast pink. *Adult female and young*, similar, but no pink on breast.

SNOWFLAKE.

Length, 6.90 inches. Upper parts brown and black; wings and tail black and white; under parts white; breast and sides brownish.

OUR WINTER BIRDS

HOW TO KNOW

6300

AND

HOW TO ATTRACT THEM

BY

FRANK M. ^{Chapman} CHAPMAN

CURATOR OF BIRDS IN THE AMERICAN MUSEUM OF NATURAL HISTORY;
EDITOR OF "BIRD LORE"



ILLUSTRATIONS

BY

ERNEST THOMPSON SETON

AND

EDMUND J. SAWYER

598.2

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EXPLANATION OF PLATES.

Plates I and II contain all the commoner (and some of the rarer) winter land birds of the north-eastern United States. They are arranged on shelves as if they were displayed in a museum case. In fact, the idea for illustrations grew from a seasonal collection of birds which many years ago the author placed on exhibition in the American Museum of Natural History. The figures are small, but so accurately has Mr. Sawyer drawn them that minute details of form and color are shown as effectively as though the birds were much larger. The great advantage of these figures over most bird illustrations is that all those in the same case are drawn to the same scale. (The scale in Plate II being slightly larger than in Plate I.) One can therefore gain a better idea of actual size from these drawings than is possible when the Crow and Kinglet, for example, are made of equal size. Furthermore, this plan permits of the direct comparison of one species with another, while a glance at the two plates gives one a comprehensive conception of our winter bird-life.

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INTRODUCTION

OUR WINTER BIRDS

I

INTRODUCTION

THE BIRDS AND YOU



WHEN we draw down the shades on a winter night we seem to divide the world into two parts. On one side lie cold and darkness; on the other, warmth and light. Outside, it may be snowing; the wind howls, the windows rattle before its fierce blasts. Inside, a fire crackles cheerfully on the hearth; there is protection from the storm, food, and comfort.

How fares it then with those on the other side of the window? What are our friends, the birds, doing out there in the blackness? They have no fireside, no cosy chairs to nestle in, no one to prepare a warm supper for them. An evergreen bough, a hollow limb, or even a snow-drift is all the shelter they can hope for; and if they have not had good luck

foraging in the afternoon they must go to bed hungry.

When we draw the shades in summer there is warmth outside as well as in. The leaves seem to rustle contentedly in the night breeze. A Robin is singing his slumber song. Soon a Whip-poor-will will begin his chant.

All's well now with the birds. We envy them their sleep beneath the stars, the awakening in the dawn; their freedom to wander at will and choose from Nature's bountiful stores. Who would not be a bird in summer?

But a winter night in the open seems chill and dreary. We pity the homeless and wish we could give them firesides like our own. So in the winter the birds seem to need our care and to be in some way dependent upon us. For this reason they occupy a much warmer place in our affections than do the birds of summer. Our relations with them seem more intimate.

The twittering Juncos at our doorstep, the Nuthatches and Woodpeckers at our suet-baskets, the Chickadees that take food from our hands, are not only our welcome guests but our personal friends.

It is not only what we give them, but what they give us, that should make us thankful for birds in winter. I look from my window over the white ex-

panse of snow. The sky is gray; the shutters creak fretfully in the wind. The glory of a summer garden is marked only by a stalk or two above the snow. The world seems dead, when a feathered mite flits through the air, perches on a nearby limb and calls a merry "Chick-a-dee-dee-dee."

What a difference in the scene his coming makes! What good cheer and contentment he brings with him!

When we go to the fields and woods in winter, birds are the only living creatures we are sure of seeing. Tree Sparrows chatter happily over their breakfast of seeds; a Nuthatch stops his search for insects' eggs long enough to look down and greet us with his queer "yank-yank." A Downy Woodpecker, intent on the capture of a grub, hammers industriously, *tap-tap-tap*. He is too busy to stop, but calls his clear "peek" to us as we pause to watch him. What a sense of companionship we have with these feathered friends of ours! They make us feel at home with Nature. How lonely we should be without them!

THE BIRDS OUR ALLIES

We are indebted to these winter birds for more than their friendship; for more than giving life to the otherwise silent fields and woods. They are our

active allies in the warfare to save our crops and forests from the army of insects that ceaselessly attack them.

The Tree Sparrows breakfasting on seeds, the Nuthatch hunting insects' eggs, the Woodpeckers digging out grubs, were all working for us. The Chickadees that accept our invitation to luncheon repay us a countless number of times for the suet and nuts we offer them.

Every one knows that insects are harmful to vegetation and that birds are their chief enemies; but who knows that the seed-eating birds are also of great value to us?

If you have ever had a garden to care for it is not necessary to tell you how constantly you have to fight the weeds to prevent them from over-growing the flowers or vegetables that you have planted.

There are ragweed and purslane, crab-grass and pigweed, and many others. Hoe and rake as you will, you never can get rid of them. Just as soon as you retire from the field, they seem to take possession of it. In the garden, in the potato-field, in the stubble, the crop of weed-seeds never fails. Who harvests it? Why, our friends the Sparrows. The seeds of the plants that cause so much trouble are their chief food in winter. Birds are known to eat the seeds of over one hundred different kinds of

weeds, and the quantity they devour is almost unbelievable.

What the Tree Sparrow Does

The Tree Sparrows that were chattering so socially over their breakfast were at the same time doing their share toward the destruction of seeds that, without their help, we should have had to fight the following summer. Perhaps we may think their share a small and unimportant one; but as we continue our walk we find a company of Tree Sparrows in nearly every field and all are gathering and crushing seed with their sharply pointed, stout little bills.

If we watched them throughout the day we should find that they passed most of their time in the same useful occupation; and we might estimate the number of seeds each bird devours in one day. Then, with the help of others, we might continue our studies of Tree Sparrows over a much larger area until we knew about how many there were in each square mile.

This was the method pursued by Professor Beal, one of the greatest authorities on the food of birds. His studies were made in the state of Iowa, where he estimated that from October to April, or for some two hundred days, the Tree Sparrow population averaged about ten to each square mile. Each

Sparrow was believed to eat about one-fourth of an ounce of weed-seeds daily. At this rate, the total consumption for the season would be 1,750,000 pounds, or 875 tons! Is this not indeed an almost unbelievable amount? Still, Professor Beal tells us that these figures "unquestionably fall short of reality."

Now I have no doubt that in the state of Iowa, as well as in all the other states inhabited by the Tree Sparrow in winter, few farmers realize what an invaluable helper they have in this little, brown, streaked Sparrow. But if some one were to advertise in the papers of Iowa that he intended to sow 875 tons of weed-seed in the state, do you believe that he would be permitted to do it? Would he not be branded as an enemy of every citizen of the commonwealth, who, if he persisted in his evil intent, should be placed under arrest?

Just one kind of Sparrow actually prevents Nature from sowing these tons of seeds, and what reward does it receive? Do we give it a vote of thanks? No! Often the State has not given it the legal protection it so well deserves. The Government at Washington has therefore taken the Tree Sparrow, and all other migratory birds, under its care as wards of the nation, and hereafter they may travel throughout our land as Citizens of the United States under the guardianship of Federal law.

Ernest Inge Thompson



TREE SPARROW.

Length, 6.35 inches. Crown bright chestnut ; back black, reddish brown, and buffy ; under parts grayish ; sides washed with brownish ; a blackish spot in the center of the breast.

How the Chickadee Helps

Chickadee seems so free of care as he flits from limb to limb, that only those who have studied his bill-of-fare know what he is doing for us. Perhaps if he realized the importance of his services the responsibilities of life would weigh more heavily upon him, and he might be as serious as a Brown Creeper.

Some years ago Mr. Forbush, ornithologist of the state of Massachusetts, invited the Chickadees and their friends to be his guests in an old orchard during the winter. Various kinds of food were offered them, but this did not prevent the birds from doing some foraging on their own account. The eggs of the cankerworm and tent caterpillar, and of other enemies of trees formed their principal fare. The birds were studied closely, and it was learned that one Chickadee would eat over 250 cankerworm eggs at a meal. In the course of a day, therefore, it might destroy more than twice this number.

It was also discovered that from March 20 to April 15, each Chickadee would devour an average of thirty female cankerworm moths per day. As each moth contained about 180 eggs we see that, between the dates named, a single Chickadee might destroy as many as 5,000 cankerworm eggs in one day!

This surprising record gives us some idea of what Chickadee is doing for us. Mr. Forbush's Chickadees, and the birds he attracted the following summer, actually saved his orchard for him. He tells us that "the trees bore luxuriant foliage during the entire summer and produced a good crop of fruit." His next neighbor's orchard was also protected by the birds but "elsewhere in the town," he writes, "most of the apple trees were defoliated and very few produced any fruit that year. While the result secured in such an exceptional year seemed remarkable, the experience of succeeding years has demonstrated that it was not so. Year after year we have kept our trees free from serious insect injury, without spraying or otherwise protecting the foliage, merely by a little effort and expenditure to attract the birds and furnish them safe homes."

WHY WE SHOULD KNOW THE BIRDS

Here, then, are three excellent reasons why we should all make friends with the birds in winter. First, because winter is the only season when birds may actually need our bounty. It is not the cold from which they suffer. In their warm, feathered suits they are probably just as comfortable out of doors as we are at our firesides. It is when prolonged storms prevent them from venturing forth to

feed, or heavy snows cover the weed stalks, or ice encases the limbs, that we may come to their relief and save them from starvation. Second, because in the silence and solitude of winter the companionship of birds is more welcome than at any other time of the year. Third, because the winter birds are powerful allies of the gardener and farmer.

To these three reasons we may add a fourth: that winter is the best season in which to begin the study of birds. We will not then be discouraged by the overwhelming abundance of bird-life of migration time or of summer.

During the winter only the birds which remain throughout the year, and which are termed Permanent Residents, and those that come from the north and are known as Winter Visitants, are with us.

If you see fifteen different kinds of birds in a morning's walk you will have done well. There may be many individuals of each kind, and this fact will give you an excellent opportunity to observe the colors and markings of each species. If you have no bird book with you, you should write careful descriptions of the strange birds you see, *while you see them*, and, on returning, you should have little difficulty in selecting from the colored plates the birds you have found and described.

When the birds come back to us from the south, as many as one hundred and thirty different kinds have been seen by one person in a single day. The time will come when you will look forward impatiently for the return of these feathered travelers. The days when they seem to throng every tree are, to the bird-lover, the most enjoyable and exciting in the whole year. But to begin to make friends with the birds in May, is as confusing as it is to enter a room filled with people none of whom we know.

So let us get acquainted with the winter birds before the birds of spring arrive from their homes in the south. I shall introduce you first to the birds of our threshold, lawn, and orchard; the everyday birds, that seem as much interested in us as we are in them. Probably you know many of them already.

Then we shall go to the fields and woods in search of the birds that rarely if ever come about our homes. We shall have to go much more than half-way to meet them, and perhaps just for that reason we shall value their friendship even more highly than we do that of the commoner, more trustful birds.

Birds' eyes are so much sharper than ours and we are so much larger than the birds, that probably birds can see all they want to of us long before

we are near enough to see all we want of them. So we should have an opera or field-glass in order to see size, shape, colors and markings of the birds clearly, and a note-book in which to enter what we have seen.

INVITING THE BIRDS



OUR love of pets and desire to have them about us often brings beneath our roof animals which are not on the best of terms with one another. We may be equally fond of our cat and our terrier, while they exhibit only armed neutrality toward one another. Our setter's instinct to capture chickens may never be overcome by training. Remember, therefore, that pussy, purring so cosily by your fireside, was born a bird killer, and few indeed are the cats which can be trained to observe the game-laws. Nor should we expect them to do so.

A host who knowingly exposes his guests to the danger of death is surely less a host than a murderer. Unless, therefore, we can be reasonably sure that the birds will be as safe near our homes as they are in their own haunts, it is far better for us to go to them rather than to ask them to come to us.

But cats are everywhere; in field and forest, as well as lawn and garden. If, therefore, we can con-

trol the cat-problem immediately about our homes, we need not hesitate to offer our hospitality to the birds, provided we observe certain precautions when entertaining them. Most important of these is placing our "dining tables" and "lunch counters" beyond the reach of our neighbor's cat. (There will always be a neighbor's cat.) Or if it be so situated that a cat might climb to it, for example in a tree or bush, let there be some protection, either of roof or branches, which will prevent a cat from springing on it.

If it be on the ground, let it be open at both ends so that when the enemy enters at one, the birds may escape at the other.

THE LODGING

We cannot expect the birds to be more than passing callers unless we provide them with lodging as well as with food.

Evergreens make the best birds' bed-rooms, and they can be used the year around. Close-limbed arbor-vitæ and cedar give more protection than the more open-branched spruce and pine. These trees offer food as well as shelter and are therefore first on the bird host's list.

Densely planted bushes and tangles of vines on southern exposures make safe and snug sleeping quarters even when the leaves are off. Brush heaps

make serviceable roosts and may be placed where needed in winter, to be removed when the foliage of summer turns every tree into a dormitory. Left in some inconspicuous position and over-run with vines, they offer capital nesting-places for Catbirds and Thrashers. I have made an attractive lodging house for birds by stacking lima bean poles, with the vines still attached, in the form of a tepee.

Having assured our feathered guests safe and comfortable quarters, we must prepare a bill-of-fare which will appeal to their varied tastes.

There should be cone-bearing trees for the Cross-bills, Pine Grosbeaks and Siskins, box elder and mountain ash for a possible Evening Grosbeak, birches for the Redpolls, Virginia creeper for the Flickers and Waxwings, sunflowers for the Goldfinches, while dogwood, thorn crab-apple (*Crataegus*), privet, bayberry, staghorn sumach, viburnum, barberry and black alder all bear fruit which, ripening in the fall, will not fail to attract winter birds.

But nature's larder cannot be stocked in a day; nor can it always be kept filled. We must therefore substitute for it or add to it food which we have learned birds like; this we may offer to them in a variety of ways, always remembering that we are setting the table for birds and not for cats.

Our pleasure in attracting the birds to our homes

in winter is measured not only by our success in giving them shelter and food during the bleak and barren season, but also by the extent to which we gain their confidence and win their companionship. We want not only to bring the birds to our gardens but to our threshold, and for this reason the most satisfactory feeding device is a window lunch counter.

An ideal window has a southern exposure with nearby trees and bushes without, and a dining room within where, as we sit down at our meals, we may see the birds at theirs.

The table itself should be worthy of the guests we hope will honor it; not a soap-box or bare wooden slab, but a rustic tray with a railing by way of a perch, and at one end a small evergreen to which the birds may retire between courses.

We cannot hope to receive immediate acceptances when we invite the birds to dine with us. Window-sills are not places in which they have been accustomed to look for food, and the habit of visiting them is not to be acquired at once. To hasten matters one bird host¹ hung his table on a wire trolley some distance from the house, where the birds could easily see it. Soon after they found it, he drew it gradually toward his window and the birds followed it to its new position.

¹See Gilbert H. Trafton, "Bird Friends" (Houghton, Mifflin Company).

A Dutcher window box ¹ will bring the birds even nearer to us. This is a three-sided glass box which is made to fit the window-opening closely and on which the sash closes as tightly as it did on the sill. It projects about a foot into the room, while the wooden floor, or food tray, extends also outward the same distance beyond the sill. Food is inserted through a lid in the top.

Meals may be served in the garden on feeding stands, or in the trees, but again let us not forget that the cat will come without any invitation. A rustic feeding stand will prove more serviceable and more sightly than many of the devices now in use. An evergreen bough, thatched or rustic roof may be added for purposes of protection and concealment.

The accompanying diagram shows such a stand as I have in mind. In place of the broad tray, which offers birds no foothold, and does not clearly indicate each guest's place at the table, as it were, I prefer a hollowed limb or a bark-covered trough in which the food may be placed. This provides a natural perch on which the birds look, and doubtless feel, far more at home than on a flat floor. Two of these limbs placed on the same upright more than double the feeding capacity of this "branch establishment" since it permits uncongenial guests to take

¹ See E. H. Baynes, "Wild Bird Guests" (E. P. Dutton & Co.).

seats at different tables. A third smaller limb may be placed well up under the roof for use as a roosting-perch, while barbed wire wound about the base of the upright as far as the lower food trough will



A RUSTIC FEEDING-STAND AND SHELTER

act as a cat-guard. This stand should be situated in a sheltered spot, and, if possible, where it will be a half-way house to the window tray.

THE BILL-OF-FARE

In preparing a bill-of-fare for our prospective bird guests, we must remember that among them are

both insect- and seed-eaters. For the former we should have a never-failing supply of suet. This may be tied to the upright post of the garden stand between the troughs, and attached to the frame at the side of the window tray. The Chickadee, Nuthatches, Downy and Hairy Woodpeckers and Brown Creeper are especially fond of this food and it will also be taken by the Jays and Starlings.

For the seed-eating Sparrows and Grosbeaks we should offer hemp, canary and sun-flower seed, Japanese millet, cracked corn and mixed chick-feed; crumbs and broken dog-biscuit. Unroasted peanuts and other nuts are eagerly eaten by birds of both classes.

Wherever we spread a table for the birds, the English Sparrows will probably be the first to come and the last to go. Even the pugnacious, noisy little Sparrows are better than no birds at all, but we surely do not want them when they crowd our native birds from the places we wish them to fill.

Since Sparrows are mainly ground feeders, it has been suggested that if we sprinkle a supply of grain on the ground near the feeding stand, they will visit it and leave the Chickadees, Nuthatches, and Downy to enjoy their meals unmolested.

HOME BIRDS

II

HOME BIRDS



THE kind of birds which you may expect to visit you will, of course, depend upon the location and surroundings of your home. Do you dwell in town or country; in the midst of fields or at the border of

woods? Are there trees and bushes near the house; do you provide food and shelter for birds in winter?

Some fortunate people are so favorably situated that they may expect to entertain our rarest winter visitors, while others may hope to receive calls only from English Sparrows and Starlings.

All the birds placed in this section I know to have visited a home in one of the large suburban towns near New York City. It is not a large place and there are other houses near by, but much planting and little trimming has given birds the cover that their natures insist they shall have.

Cats are here unknown and a bountiful lunch-counter offers a never-failing supply of the things that birds love.

CHICKADEES

A BIRD WITHOUT FEAR

(Fig. 32)



IF we should keep a guest-book and write in it the names of all our bird visitors, "Chickadee," I am sure, would be entered on nearly every page. Of all our birds he is the most friendly. Fearlessly he comes so near us that we can see his bright little black eyes shine, and then introduces himself by calling his name so clearly that no one can fail to understand him. It is just as though he said: "How do you do? *I* am Chickadee-dee-dee." No one can refuse to extend the hand of friendship to so delightful a caller. Often he will honor us by accepting it as a perch, which, I suppose, is as near as a bird can come to shaking hands.

Certainly no handshake ever arouses within us more cordial, kindly feelings than does the grip of Chickadee's little claws on our finger. We are so big and he is such a little fellow that when he ac-

tually places his life in our hand he shows a faith in our good-will that wins our heart. No one could betray Chickadee's trust.

When you have a food-shelf to which the same Chickadees return day after day, it does not take long to make friends with them. Soon they will take a bit of nut from your hand and perch upon your head or shoulders to ask for more. Several times I have had this happen with strange Chickadees in the woods far from home. The experience was thrilling. I felt as though some sprite had touched me with a magic wand and admitted me into the ranks of woodland dwellers.

If some day Chickadee touches you with his wand, I believe that you, too, will find he has opened a new world to you. A world of feathered folk whose ways are more wonderful than fairy tales. You will see them build their homes, quaint dwellings of grass and straw, sticks and mud, neatly furnished with hair, down or feathers. You will see the eggs, of many colors and curious markings, they lay in them. You will marvel, as all the world has marveled, that from these dainty, polished shells the young ones come. You may watch the parent birds care for their families, and see the birdlings grow and don their feathered suits. Perhaps you may actually be near by when they make their first journey in the

world, and the untried wings bear them to a neighboring limb. Then you will learn how, with these wings, the migratory species may travel thousands of miles to their winter homes in the tropics and return to us the following spring.

Best of all, your ears will be opened to the voices of birds. Woods and fields that before seemed silent will now ring with calls and songs. Many have a meaning to the birds that utter them and some day you too may understand them.

The notes with which Chickadee first makes himself known seem to us like a greeting. To them he adds some gurgles and chuckles, which we cannot interpret, though they sound very much like the things we should expect Chickadee to say. But we must not form our opinion of Chickadee's character from his everyday conversation. In addition to the calls which have given him his name, he utters also a clear, high whistle of two or three notes. It is so musical, so sad and plaintive, so filled with tender sentiment that it is difficult to believe such a matter-of-fact fellow as Chickadee seems to be can be its author.

As a boy, I knew the call long before I was aware that it was Chickadee's. When, on a winter's morning, I heard it floating through the woods, I used to fancy that perhaps it was Jack Frost with an



CHICKADEE.

Length, 5.25 inches. Crown and throat black; cheeks white; back gray; belly white, washed with brownish.

BROWN CREEPER.

Length, 5.65 inches. Upper parts brown, rusty, and white; under parts white.

icicle for a flute. Finally I answered, and you may imagine my surprise when Chickadee came flitting along from tree to tree and, perching almost within reach, whistled the call which had so aroused my curiosity.

It was just as though you should discover that some boy friend whom you had known for years, could not only talk and shout like all the rest of the boys, but that he was also a remarkable singer.

These sweet notes are not Chickadee's song, for they are uttered by the female as well as the male, and we know that with nearly all birds only the male sings. Nevertheless, one hears them more frequently in March and April when Chickadee, with other birds, is looking for a mate. If his search is successful, it is followed, about the first week in May, by a hunt for a nesting place. This is always in a hole, usually in a stump or limb, and not more than fifteen feet above the ground. Sometimes a deserted Woodpecker's nest is chosen; at others, when the wood is more or less decayed and soft, Chickadee makes the hole himself. With only his stout little bill for a tool and stout little heart to urge on his work, he hammers persistently away until a big enough hole has been made. This is lined with soft plant-down, often from a fern, and with moss, fur, and feathers.

For so small a bird Chickadee has a surprisingly large family. I once found a Chickadee's nest with nine eggs; but six or seven is the usual number. They are white, spotted and speckled with brownish, chiefly at the larger end.

There are busy times in the Chickadee family when the eggs hatch. Meals are served at all hours from daylight to dusk. In the opening chapter I have told you something of the debt we owe Chickadee when he hunts insects only for himself. Think, then, of the number he must destroy when he provides food for a family of nine!

Fortunately for their parents, the young Chickadees grow rapidly. Within a week after leaving the egg they have a feathered suit like that worn by their elders and in a few more days they leave their crowded quarters and, under their parents' care, begin to learn the ways of their kind.

Chickadee is with us throughout the year and, therefore, belongs in the class of Permanent Residents. We see him more frequently from October to May, when he visits our homes, than during the summer, when he returns to the woods to raise his family.

In eastern North America there are three kinds of Chickadees. Our friend the Black-cap is the best known. He is found from central New Jersey

to Canada, and, in the winter, as far south as the District of Columbia.

From central New Jersey southward to the Gulf States we have the Carolina Chickadee. This is a slightly smaller bird with less whitish margins on the wing-feathers. Its "Chickadee" note is described as higher and more hurried, and its whistle call is usually composed of four notes instead of two, and is not so strong and clear as that of the more northern bird.

In northern New England and Canada there is a third Chickadee generally known as the Hudsonian Chickadee. It has a *brownish* cap and its nasal drawling "tchick, chee-day-day" is so unlike the notes of our Black-cap that you should know the Hudsonian by his voice as well as his brownish crown. He rarely goes far from his summer home, but in winter has been seen in small numbers as far south as northern New Jersey.

NUTHATCHES

THE TOPSY-TURVY BIRDS

White-Breasted Nuthatch

(Figs. 38, 39)



JUDGED by the frequency with which they are seen together, one of Chickadee's best friends is the White-breasted Nuthatch. During the summer, when both are occupied with family cares, they have

little time for each other's society, but in the winter they are inseparable companions.

When, therefore, we hear Chickadee's greeting and soon find him swinging from limb to limb, we often hear also a strange voice saying "yank, yank" and chattering some words in a lower tone as though its owner was talking to himself. We look about to see who this can be and quickly find a short-tailed, long-billed, gray, black-capped bird who, we observe, runs down the trunk of a tree as easily as he can climb up.

At the same moment he sees us, stops his search

for insects and their eggs, looks us over for a second or two, grunts another "yank-yank" and then continues his hunting.

Evidently we are not as pleasing to White-breast as we are to Chickadee. His curiosity about us is soon satisfied. With patience and nuts we may sometimes induce him to perch on our hand, but it is the nut and not good-fellowship that attracts him. But we always welcome Nuthatch, and if he does not seem to care especially for us, he never hesitates to accept an invitation to our lunch counter.

Nuthatch ought to be one of the great successes in the world of birds, for he is one of the few birds that seem to give thought to the morrow. We have all seen dogs bury bones, and some of us have seen a gray squirrel hide a nut, or have found the chipmunk's winter supply of provisions. This habit of storing food is not uncommon with animals that spend their lives in one place. But birds are more independent. If food fails in one part of the country, their wings can soon take them to a land of abundance. It is not necessary for them to think about to-morrow's dinner. They have no closets or cellars for hoarding food.

To this rule White-breast, or as he has also been called, White-vest, is an exception. Watch him when he comes to your food-shelf. See how freely

he helps himself to suet! See, also, that he does not swallow it but flies off with it in his bill to a nearby tree. Here he creeps actively about looking for the right kind of a crack or crevice in the bark; when it is found the suet is placed in it and made secure by a few taps of the bill. Then White-breast hurries back to the lunch counter for more and that he hides in another bark cupboard. Perhaps he may repeat this performance many times, and if he can find each little storehouse, he has a memory of which any one might be proud.

Sometimes White-breast takes a nut or acorn, wedges it tightly in a crack and then hammers away until the shell is broken, when he eats the kernel within. It is this habit which has given him the name of Nuthatch, though one might think that "Nutcracker" would be better.

We must not judge White-breast's diet by the food he selects from the table we set for him and his friends. Even when this table is ready for him, he spends much time running up and down the trunks and limbs of the neighboring trees looking for the eggs and larvæ of insects and spiders which form more than one-half his food. Many of the insects are the enemies of the trees on which they live and; in destroying them, White-breast repays us a thousand-fold for our contributions to his larder.



RED-BREASTED NUTHATCH.

Length, 4·60 inches. *Male*, crown and line through eye black ; back gray ; under parts rusty. *Female*, similar, but black replaced by gray.

WHITE-BREASTED NUTHATCH.

Length, 6·05 inches. *Male*, crown black ; back gray ; face and under parts white. *Female*, similar, but crown slaty.

Even White-breast's best friend would not call him a musician. His song suggests a kind of mirthless laughter: "hah-hah-hah-hah-hah," he sings all on one note. Heard in May when the air resounds with the melodies of Thrushes and Grosbeaks, and Thrasher's far-flung measures, the humble effort of White-breast would pass unnoticed. But heard in early spring when every sign of the coming of summer is eagerly welcomed, White-breast's monotone echoes pleasantly through the leafless woods.

White-breast is among the earliest of small birds to nest. In the first half of April he and his mate find or make a hole in a tree or stump, and line it with feathers, leaves, and fur. Five to eight eggs are laid; they are creamy white, thickly and rather evenly spotted and speckled with reddish brown and purplish. In color the eggs of both White-breast and his friend Chickadee are an exception to the rule that birds which nest in holes and similar places lay white, unmarked eggs.

The young White-breasts, like young Chickadees, wear a suit resembling that of their parents when they leave the nest. They do not at once venture forth into the world alone, but remain under the guidance of their elders until they have learned to care for themselves. During this time, and perhaps longer, they may return every night to

sleep in the snug quarters in which they were born.

Late one afternoon in August, I stopped beneath a pine tree in the Rocky Mountains of Colorado to look at a Pygmy Nuthatch (a small cousin of White-breast). Soon I saw another and then a third, fourth and fifth; the tree seemed to be swarming with Nuthatches! They were chattering to one another and, as the light failed, they all began to come downward toward a large, horizontal limb not far above my head. In this limb there were two openings, which looked as though they were connected. As I watched, one of the Nuthatches slipped into the opening nearest the trunk. He was quickly followed by a second and this one in turn by a third. In less than a minute there was a procession of Nuthatches passing in at the same entrance, and when the last one disappeared I had counted twenty-eight! Long before this number was reached I expected to see Nuthatches crowded out of the second opening, but the capacity of the limb to hold Nuthatches seemed unlimited. How many Nuthatch families, I wonder, shared this dormitory?

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Red-Breasted Nuthatch

(Figs. 60, 61)

White-breast is with us throughout the year and belongs in the group of Permanent Residents. But he has a cousin in the north who comes to us in the fall and remains only until spring, and is therefore classed among the Winter Visitants.

About September first, if you think you hear some one blowing a penny trumpet from a nearby pine or spruce tree, you will probably find that it is a Red-breast announcing his arrival from the north. He does not come every year, and when he does appear we cannot tell whether he will pass the winter with us or continue his journey further south. Red-breast is rather particular in his choice of food. He is fond of the seeds of pine or spruce cones and he is not likely to stay with us if he cannot find this kind of fare.

Probably when it is to be had in his summer home in Canada and northern New England, he does not travel far southward. Doubtless this is the reason why Red-breast visits us in numbers some years and is not seen at all, or but rarely, in others.

Red-breast's call is not so loud as that of White-breast, nor is it given in such a business-like way.

He seems to drawl, through his nose, a high "yna-yna," quite different from the vigorous "yank-yank" of White-breast.

He may be known by size and color as well as by voice. He has the black cap and gray back of White-breast, but is smaller and wears a black stripe from his eye to his ear, and his underparts are more or less strongly tinged with reddish brown. In the female, the crown and eye-stripe are grayish.

Red-breast's nesting ways are much like those of White-breast, but living farther north he does not go to housekeeping before the first week in May.

THE DOWNY AND HAIRY WOODPECKERS

TWO CARPENTER COUSINS

Downy Woodpecker

(Figs. 26, 27)



EITHER my curiosity nor interest is aroused when I hear a man hammer; but when the sound of Downy's *tap-tap-tap* comes to my ears I want to see him at work.

He may greet me with a single word, "peek"—as clear and business-like as the tapping itself. To me it is a kind of code signal for "good-morning, I'm really glad to see you, but if you don't mind I'll go right on with what I'm doing here."

What he is doing is of importance to him and mankind as well. He is getting his breakfast and at the same time ridding the tree of a grub which might have bored a channel through its heart.

It is interesting to watch Downy hunting. He seems to be merely hitching his way up the tree. He taps here and there, picking out an insect's egg

by the way, but probably all the time he is listening for the borer within. When he hears it he goes to work in earnest. Without a pause he picks away busily. The chips fly before the strokes from his stout little chisel. In a surprisingly short time he has made an opening two or three inches deep. At the bottom of it lies the grub. Now Downy uses his spear. This is nothing less than his tongue, which Downy can thrust out an inch or more beyond the end of his bill. Its tip is horny, sharply



A WOODPECKER'S SPEAR

(Tip of Pileated Woodpecker's tongue, much enlarged)

pointed, and barbed; just the kind of a weapon with which to impale grubs and draw them from their retreats. The grub captured, Downy sounds his sharp call, as if in triumph, and perhaps follows it with a short rolling rattle. Then he continues his hunting.

Downy uses his bill as a combined pick and chisel not only to secure food, but also to provide a home for himself and his family. Early in May he selects a dead limb and makes a hole usually about fifteen to twenty feet from the ground, just large enough to enter. Then he hollows out a larger cavity within.

While constructing this he hammers away quite out of sight, and it is often puzzling to locate the source of the muffled blows. A freshly made doorway, and chips scattered on the leaves below, give a clue to the hidden carpenter's whereabouts.

His home is not furnished with the straws, hair, or feathers with which so many birds line their nests, and the four to six eggs are laid on the bare floor. Like those of all Woodpeckers, and of nearly all birds that nest in holes, they are pure white. In an exposed place the snowy shells could easily be seen by an egg-hunting Crow or Jay. So we will find that the eggs of birds which lay in open nests are usually colored. A blue, speckled or spotted egg is much more difficult to discover than a gleaming white one, and it is therefore believed that the shades, tints and markings which make birds' eggs so beautiful, serve the useful purpose of concealing the eggs from nest-robbers.

Downy is one of the few birds that makes its nest a home as well as a nursery for the rearing of his family. The Robin, Jay, Song Sparrow and most true nest-builders, abandon their nests after their young can fly; but Downy may return to sleep in his night after night. Sometimes he makes a hole for use only as sleeping quarters during the winter.

Downy's bill is employed for three quite different

purposes. We have seen how it is used to secure food and make a home, but in addition to being a pick and chisel, it is also a musical instrument! That is to say, it is a *part* of a musical instrument—the drumstick with which Downy beats a resounding roll on some resonant limb.

This “br-r-r-r-r-r-r-r-up” is Downy’s song. A man with a *pair* of drumsticks could not produce a better tattoo; that Downy can do so well with only one indicates how rapidly he beats his drum. The little drummer seems to enjoy listening to the echo of his music. He tests first this limb and then that, as though he were looking for one that would produce the loudest noise. The result cannot in truth be called musical, but like White-breast’s mirthless laughter, it is one of the pleasing and welcome voices of spring.

No small part of Downy’s skill as a carpenter and drummer is due to the support he receives from his feet and tail. Imagine a Robin clinging to the trunk of a tree and trying to use its bill as Downy does! Even if it had the same kind of bill it could not perch firmly enough to deliver effective blows.

I once placed a museum specimen of a Woodpecker in Helen Keller’s hands and through her companion asked her to tell me what she could discover about its toes. Quickly her sensitive fingers found



DOWNY WOODPECKER.

Length, 6.75 inches. *Male*, upper parts black and white, nape scarlet ; under parts white. *Female*, similar, but no scarlet on nape.

an answer to the question and she replied, "It has two front toes and two hind ones." Robin, we know, with all other Perching Birds, has three front toes and one hind one, an arrangement which permits him to grasp small twigs. But Downy does not perch, he clings, and his strong, widespreading toes give him a firm grip on the bark.

The last thing we should expect a bird to do is to sit on its tail; but this is exactly what Downy does.



DOWNY'S CHISEL AND CLIMBER

The tips of Robin's tail-feathers are rounded and soft, while Downy's are pointed and as stiff as bristles. They stick into the bark and make as good a brace as the belt a telegraph linesman uses when climbing poles.

We have all seen one of those men with sharp spurs strapped to his feet go up a smooth pole. When he reaches the place at which he wishes to work, he leans back on the strap, which goes around the pole and his body, just as Downy leans back on his tail-feathers.

Soon after the first railroad crossed the continent, a famous Indian chief was brought to a station in the West to see a locomotive. When the strange and terrible monster appeared, it seemed neither to interest nor excite him; but when a linesman with his spurs on happened to ascend a nearby telegraph pole, he exclaimed with wonder that a man could climb like a Woodpecker!

Aside from the Woodpeckers we have only four other climbing birds. Two of these, the White-breasted and Red-breasted Nuthatches, we have already met. The third is the Brown Creeper and the fourth the Black and White Warbler.

The Nuthatches have a plain gray back and wings, quite unlike Downy's black and white ones, and they climb head downward quite as often as head upward, while Downy always goes head upward, and when he wants to go downward, backs down.

The Brown Creeper is so much smaller and so differently colored that you never could mistake him for Downy, while the Black and White Warbler does not come to us from the south until the latter part of April. By that time we should know Downy so well that we can tell him at a glance from the Warbler, which is smaller and which goes creeping around trunks and limbs instead of hitching somewhat jerkily upward or forward.

The male Downy wears a red band across the back of his head. In the female this band is white. Downy is with us throughout the year and therefore belongs in the class of Permanent Residents.

Hairy Woodpecker

(Figs. 28, 29)

The old proverb tells us that "birds of a feather flock together," but we shall learn that birds may be almost of a feather and still not seek each other's society. The only feathers worn by the Downy and Hairy Woodpeckers which are not alike are those on each side of the tail. The Downy has these feathers white with small black bars, but in the Hairy they are white without black bars.

These differences are so slight that it would be difficult to distinguish one bird from the other were not the Hairy much the larger of the two.

In spite of their close resemblance, Downy is much more often seen with his distant relative, the White-breasted Nuthatch, than he is with his cousin, the Hairy. The latter is not only less common, but he prefers the woods to our gardens; two good reasons why he is less often seen than the Downy.

His voice is like that of the Downy, but is no-

ticeably louder, and he does not beat his drum so rapidly.

The two birds build the same kind of nest, but the Hairy, who, like the Downy, is a Permanent Resident, goes to housekeeping in the latter part of April.

ENGLISH SPARROW

AN UNWELCOME GUEST

(Figs. 30, 31)



OW unfortunate it is that our most numerous bird should also be our least attractive one. Possibly in the city, where Sparrow is the only bird, we may welcome him, because any bird is better than none at all. But in the country, where Sparrow crowds Chickadee, White-breast, and Downy from the feeding-station, and drives Bluebird, Wren and Martin from the houses we have erected for them, even the most tender-hearted bird-lover must regard him as a pest.

It is true that he can no more help being a Sparrow than Blue Jay can help being a Blue Jay. But Blue Jay has good looks and some traits to commend him, while it is difficult to find anything to admire in a Sparrow.

His plumage rarely looks bright and clean; his voice is harsh and discordant, and he seems to be

always using it; he is pugnacious, has no regard for the rights of others, and is untidy about his home.

If he were a native bird we might believe that, like flies and mosquitoes and other noxious insects, he played some part in Nature's plan the importance of which we do not as yet understand. But Sparrow is not an American bird. His ancestors were brought to this country from Europe in 1851 and 1852 by some well-intentioned but misguided gentleman who believed he would rid our trees of caterpillars which then infested them.

Sometimes, it is true, Sparrow does eat insects, but, like other Sparrows, he lives chiefly on seeds. If he inhabited the fields and fed on the seeds of weeds he would be of value to us. But he insists on living as near us as he can without actually entering our houses. Our feeding-stands, he seems to think, are kept supplied for his especial benefit. He claims as large a share of the Chickadees' food as though his services were as valuable as theirs.

He builds his nest on our window-sills, behind shutters, in gutters, anywhere and everywhere that he can find a place for the mass of straw, rags, and feathers which make his home; and when we throw the rubbish out, he refuses to take the hint and promptly replaces it.

Persistence is indeed one of Sparrow's most prom-

inent characteristics. To it he owes his success in life. Treatment that would drive native birds from our homes for the season seems to be regarded by him as a cordial invitation to stay. Nothing discourages him. His habits have won few friends among men and apparently none among birds; but he is as cheerful as though he were the most loved of feathered creatures.

Sparrow begins to nest in April, and has been known to raise as many as six broods in one season. At this rate of increase it has been estimated that if all should live, the progeny of one pair of Sparrows in ten years would amount to 275,716,983,698!

From four to seven eggs are laid. In color they vary from plain white to olive brown, but are usually white, finely and evenly marked with olive.

After the young Sparrows leave the nest they gather in flocks which, with other flocks, return every night to the same roosting-place. Sometimes this is in a densely foliated tree, at others in ivy or other vines. The birds all seem to have much to say as they retire, and chatter together in a chorus which is fortunately hushed by the approach of darkness.

The Sparrow's worst enemy cannot deny that he is persistent, brave, and cheerful. These are surely excellent traits and we might well admire them in

Sparrow were he not so selfish and quarrelsome; so wanting in those tender, gentler qualities which make Bluebird so lovable and Chickadee so winning.

Better a humble rôle in life than to win success at the price Sparrow has paid for it.

EUROPEAN STARLING

OUR LATEST BIRD CITIZEN

(*Figs. 24, 25*)



IN the year 1890, the same gentleman who was responsible for the introduction of English Sparrows into Central Park, New York City, caused sixty Starlings to be released there. The following year forty more were liberated.

America evidently agrees with these birds. During a period when native birds have barely held their own and some species have decreased in numbers, Starling has multiplied and spread amazingly. The one hundred Starlings now have hundreds of thousands of descendants, and from the boundaries of Central Park they have reached New Hampshire and Virginia, and even west of the Alleghanies. At the present rate of increase it will not be long before Starling is one of the most common birds of eastern North America.

Without assistance he may not cross the treeless

plains of our interior, for Starling is a tree-loving bird.

Whether Starling will prove a useful citizen we do not as yet know. He feeds to some extent upon harmless insects, but he is also fond of fruit, while his habit of nesting in holes induces him to occupy the homes in which Flicker and Bluebird had formerly reared their families. He is with us throughout the year and is one of the first of the smaller birds to begin housekeeping. When Flicker and Bluebird return to the hole they had used the year before, we may imagine their surprise to find it in the possession of a strange black bird who refuses to move out.

It will be observed that the Starling, like the English Sparrow, is evidently lacking in those finer traits of character which prompt an unwelcome guest quickly to take his departure. Doubtless for this reason he has thrived where a more timid, retiring bird would have failed.

Even the most ardent champion of the rights of our native birds will admit that Starling has many qualities which commend him to us. His plumage is bright and glossy, his voice cheerful, and his habits interesting. In the summer he wears a shining, greenish black costume lightly dotted with creamish. In the winter the dots are larger and more numer-

ous. In the summer, which means also late spring, his bill is yellow; in the fall and winter it is brownish.

Like our Purple Grackle or Crow Blackbird, Starling is a walker, and he seeks his food on the ground. But the Grackle's tail is noticeably long while Starling's is conspicuously short, reaching only a little beyond his sharply pointed wings. When flying he reminds me of a large spear-head.

When the young Starlings leave the nest they are dull gray in color, but they soon lose this plumage and acquire one similar to that worn by their parents in winter.

Starling's most characteristic note is a high, clear, long-drawn whistle. It is so much like the one we sometimes use when we wish to attract another person's attention that when we hear Starling's call we cannot be sure at first whether we are listening to a bird or a man.

This whistle also forms part of Starling's song, a kind of choking, gasping, guttural soliloquy, which can be heard only when you are quite near the singer. Occasionally one hears him utter a plaintive call so exactly like that of the Wood Pewee that for some years I believed he was imitating that bird; but I have since concluded that the notes are his own.

Starling's four to six pale blue eggs are laid in

April, and by May 15 we may hear the grating call of the young Starlings as they follow their parents about on the lawn and beg for food. The birds now begin to gather in flocks which, by August, may contain several thousand individuals.

At this season one may see the wonderful aerial evolutions for which Starlings are famous. One might believe that they had been called together for fall maneuvers. They swing through the air changing from one formation to another with a precision which would excite the envy of the best trained soldier. Now they look like a dark round cloud, then they lengthen out into the shape of a huge balloon, then in a second they whirl as one bird and stream away like a banner of smoke.

In the fall I always welcome the sight of these birds drilling in the air. But before the Starlings came, the appearance of a flock of black birds in late February or early March was an unmistakable sign of the coming of spring. They might be Redwings, or they might be Grackles; but they surely were the advance guard of the great army which was marching up from the South. But now, who knows, they may be only Starlings!

BLUE JAY

A BIRD OF CHARACTER

(*Fig. 20*)



MAN who possessed Blue Jay's character and voice would be far from popular. But we must not judge birds by the standards we apply to men.

If Blue Jay's call is a loud, harsh "jay-jay," we must remember that he is speaking the language of Jays. If his manner seems overbearing and if he sometimes robs smaller birds of their eggs, we must not forget that the only rules of conduct he knows are those of other Blue Jays. While, therefore, we may not altogether approve of the ways of Jays, we should not blame Blue Jay for adopting them.

We cannot make friends with Blue Jay as we do with Chickadee, but as I look back over my long acquaintance with him and his kind, I discover what I think is an improvement in his habits. When first I met him he was a bird of the woods and distant

hedgerows; now he lives in our gardens and builds his home near ours.

Blue Jay is a shrewd, wise bird, and I believe that he has taken up his abode in towns and villages not because he is fond of our society, but because he is safer there from attack by his natural enemies.

However this may be, we may credit him with having learned to trust us even if he does not care for us. Perhaps some day he may become as friendly as his cousin, the Florida Jay.

No one will deny that, so far as appearance goes, Blue Jay is a striking addition to our list of bird callers. His size, beautiful costume of blue and white, jaunty crest, and gay, dashing actions always command our attention and admiration. He may rifle a nest or two, he may visit our feeding-stand more as a robber than a guest, he may awaken us at an early hour by his loud cries, but he is such an attractive bit of wild life, that, knowing he has had only the training of Jays, we overlook his faults.

As we become more familiar with Blue Jay's habits, we shall find that he has much to commend him beside his fine feathers. His vocabulary is by no means restricted to the loud calls which have given him his name. He has also a variety of whistles, some of which are really pleasing. When he is with

other Jays he utters a number of low notes so conversational in character that one can easily imagine the birds are talking together. Perhaps they are.

Added to these vocal gifts, Blue Jay is an excellent mimic. He can imitate the calls of the Red-shouldered, Red-tailed, and Sparrow Hawks so closely that I imagine not even those birds themselves can detect the difference between his notes and their own. But when I hear the call of a Hawk quickly followed by Blue Jay's familiar notes, I conclude that he is the author of both.

Blue Jay's unusual intelligence is well shown during the nesting season. Every one who has been fortunate enough to live in the country knows how easy it is to find the nest of a Robin, Catbird, or Wood Thrush. The nearer we approach it the more loudly do the birds protest. Only as we retreat do they become less excited. It is just as though they called "hot" and "cold," and if we follow the clue their voices give, we soon discover the secret they really wish to conceal.

But the Blue Jay gives you no hint to the whereabouts of his home. During the nesting season his voice is rarely heard. If you should chance to be near his nest not a word will he say about it. Probably you will not see him in the vicinity. Even when by chance or very careful searching you find his

well-made dwelling, he still will make no outcry.

You may think him cowardly and point to the bravery of the Robin and other birds in defending their haunts. But Blue Jay is not a coward; he merely seems to have some of that discretion which is the better part of valor. Screaming and making a great fuss would not help matters and might draw a crowd, so he keeps perfectly still and watches you from a nearby hiding place.

Perhaps with that confidence in mankind which has led him to live near us, he may believe that you will not take his eggs or harm his offspring. But let a Crow or Owl appear and he will give you a convincing exhibition of his courage.

I once watched a Blue Jay's nest containing five young birds for over an hour before I saw anything of the parents, though they must have seen me. Then they came only for a moment and were gone again. But when I placed a stuffed Screech Owl near their nest, they came to the defense of their young as fast as their wings could bring them, and attacked the poor little Owl with such force that at the first blow he was knocked completely off his perch.

About May first Blue Jay builds a large, finely woven nest of twigs, lined with rootlets, and places

it in a tree usually from ten to twenty feet above the ground.

The four or five eggs are pale olive-green or brownish ashy, rather thickly spotted with cinnamon-brown. The nestling plumage of the young Jays is blue and white like that of their parents.

CARDINAL

A BIT OF FLAME IN FEATHERS



O closely do we associate brightly colored birds with the tropics that the Cardinal seems like a visitor from the Equator. At least we expect him to pass the winter there, but all seasons seem alike to him, and he appears to feel as much at home in a snow-storm as in some tangled thicket richly clad with foliage. Brilliant as he is against a white background, he is even more fiery in summer, the grayish tips to his feathers, which slightly veil his plumage in winter, having at that season worn off. But at all times he has a surprising way of disappearing when one would think there was not enough cover near to conceal his gleaming coat. Then, only his sharp, small *chip*, tells us in what bush he is hiding.

It is when he is singing that the Cardinal can be seen to best advantage. Then he often seeks an exposed perch where his message will be borne to the four points of the compass, and head erect, crest raised, calls in his rich, sympathetic voice "De-ar,

de-ar, de-ar, come he-ar, he-re-he-re; quick-quick, hurry-hurry-hurry."

Before long his appeal is answered by an olive-brown mate. Unlike most birds of her sex she, too,



CARDINAL

is a vocalist, and can respond to the ardent serenade of her lover with a song of her own, though it is by no means so loud as his.

If all goes well with this musical wooing, a nest of twigs, rootlets and bits of grass will soon be built in the nearby undergrowth, and in due time it will contain three or four bluish white eggs, spotted and speckled with brown. Cardinals are rarely seen

north of New York City. They are not migratory and from that point southward are found throughout the year. Except for the black on his face and chin, the male is bright red; the female is olive-brown above, paler below, with the wings and tail tinged with red. Her crest is not so large as that of the male, but when erect is conspicuous.

FLICKER

A CANDIDATE FOR NATIONAL HONORS

(Figs. 21, 22)



IF I were asked to vote for a national bird I should cast my ballot for the Flicker. He is a real citizen of North America. His home extends from Central America to Canada. Throughout the greater part of this wide territory he may be found every month in the year, though north of the latitude of New York he is not common during the winter.

The Flicker would have my vote not only because he inhabits the entire nation, and can therefore represent every state in it, but in character, habits, and appearance he is clearly a credit to the country.

He is alert, industrious, progressive and successful. Some members of his family (for example, the Ivory-billed Woodpecker and Pileated Woodpecker) have been unable to adapt themselves to the changes which have been made in their haunts by man. When the forests go they also disappear.

This is not the Flicker's fate. When the woods are felled, he comes to live in our orchards and gardens. If the pruner and forester leave him no dead limbs to nest in, he drills a hole in a fence-post or accepts the boxes we offer him.

He wins his way peaceably if he can, but will defend his rights courageously if necessary. That new bird settler, the Starling, often tries to take possession of Flicker's home, and is doubtless surprised to find that although when undisturbed Flicker minds his own affairs, when aroused he is a foe to be feared.

Flicker owes his success to his ability to change his diet as well as his nesting site. If you compare his bill with that of our other Woodpeckers you will observe that it is longer, more slender and slightly curved. His tongue, also, is unlike that of the Downy or Hairy Woodpecker, the tip being practically without barbs.

Although more like a probe than a chisel, Flicker can make the chips fly from an old log or dead limb when grub-hunting, but his favorite fare is ants. These he usually captures at their homes and this explains why we so often see Flicker on the ground. In the distance we might think he was a Robin tugging at a worm, as he rapidly probes an ant-hill. The long tongue, covered with a gummy secretion,

is thrust out, the ants stick to it and are caught in such numbers that as many as 3,000 have been found in the stomach of one Flicker.

To his fare of grubs and ants Flicker adds fruit. The berries of the Virginia creeper and sour gum are among his favorites and he is also fond of wild cherries, pokeberries, berries of the dogwood, mountain ash and many others. Flicker therefore draws his supply of food from the ground and from the trunks of trees, as well as from the fruit they bear.

In appearance Flicker, to my mind, is one of the most attractive of our birds. His costume contains many beautiful colors combined in a striking but pleasing variety of patterns. The black crescent on his breast and scarlet band on his nape, the flash, or "flicker" of yellow revealed in his wings when he flies; the large white spot that shows so conspicuously on his lower back when he goes bounding away from us in his graceful, undulating flight, all distinguish him from other birds and, together with his habits and notes, have won him many names. Among over one hundred others, he has been called Crescent-Bird, Golden-winged Woodpecker, and Cotton Rump; High-hole, Yarrup and Yellowhammer. These all show that Flicker is known far and wide, as any national bird should be. In fact, Flicker seems to possess in a high degree all but one

of the attributes which the chosen bird of the nation should have. He is a native of every state, he is adaptive and intelligent; peaceful but brave; useful and beautiful, but he cannot sing; and song is so preëminently the divine gift of birds, that a bird which lacks it does not seem to be quite perfect.

Flicker, it is true, has a greater repertoire than most members of his family. He is an accomplished drummer and sometimes beats his tattoo on a tin roof or gutter with more enthusiasm than consideration for the ears of would-be sleepers in adjoining bedrooms.

He announces his presence with a loud, strongly accented "Kée-yer" and his many times repeated "cuh-cuh-cuh" is as much a part of spring as the piping of frogs. The "kwée-chu, kwée-chu" with which he accompanies his odd courtship poses, and the chuckle he utters when he springs up before us cannot well be called songs, but at least they are one of the most characteristic of Nature's voices, with which, in time, we establish associations that make them inexpressibly dear to us.

Flicker and his mate go house-hunting early in April, but the eggs are not laid for a month later. They number five to nine, and like those of all Woodpeckers, are spotless white. The young Flickers are born naked and do not get their first suit of feathers,

which is much like that of their parents, until they are a week or more old. They are noisy little chaps and if you tap the tree trunk or limb in which they are living, they utter in chorus a loud buzzing protest. They climb to the nest-hole to receive their food, which the parents give them by a process known as regurgitation. In this act the parent thrusts its bill far down the throat of the young and brings up from the crop, or regurgitates, partly digested food. On this fare the young grow so rapidly that they leave the nest when they are about four weeks old. Then for some time they remain under their parents' care, learning the ways of their kind.

SONG SPARROW

"A LITTLE BROWN BIRD"

(Fig. 34)



ATE in February, when in some sheltered, sun-warmed nook, I hear a Song Sparrow sing, I know that spring is near because "a little bird has told me so." The ground may still be white with snow, the bare branches show no sign of life. Not even the pussy willows have "crept out along each bough," nor have the frogs piped a single note. But there is the signal, "Spring, Spring, Spring, sunny days are here."

It is said in such a sweet, unpretentious voice and by such a modest, unassuming little bird, that one cannot at first believe Nature would send so great a message in such a simple way.

When the Cranes trumpet it to the four winds and the Geese call it through the sky, we know it is true; but long before they have spread the news so that any one may hear, those whose ears are attuned to

Nature's voices, loud or low, have heard it from the Song Sparrow.

Watch him as he sings the glad tidings. He seems to realize their importance and, with head thrown back and body quivering, puts his whole soul into the delivery of his message.

Only the born bird-lover may want to know all the birds, but every one should know the Song Sparrow. The Warblers, Vireos and Flycatchers each bear a message for him who can interpret it, but any one can understand the Song Sparrow. He speaks a common language. In February, when he sings the welcome news of the birth of a new year, I half expect to see him clad in cloth of gold, but the badge of black he wears upon his breast is his only distinctive mark. For the rest, he is just a little brown Sparrow streaked below as well as above.

Although his song varies so greatly that one rarely hears two Song Sparrows sing exactly alike and even the same bird may sing in half a dozen different ways, there is a quality about his voice which always enables one to identify it. The three opening notes are usually alike and, however great may be the variations that follow, they have the unmistakable tone of the Song Sparrow's voice.

Equally characteristic is Song Sparrow's call-note, a questioning "chimp" or "trink" which, once you

have learned it, is as good an identification mark as though the bird were to speak its own name.

Young Song Sparrows sing a rambling kind of low song, which seems to have neither beginning nor end, and bears no resemblance to the strongly accented performance of their parent.

Song Sparrow is not a bird of the fields. He never lives far from bushes into which, with a "pumping" motion of the tail, he generally flies when alarmed. He prefers the vicinity of water, and an alder-bordered brook with marsh marigolds, like patches of sunlight on the fresh green of the neighboring meadows, makes his ideal home.

Though far less abundant in winter than in summer, Song Sparrow is with us throughout the year. He opens the season of song in February and closes it in November. Late in April he and his mate build on or near the ground a nest of coarse grasses, rootlets, dead leaves and strips of bark and line it with fine grasses. The four or five eggs are whitish with numerous reddish-brown markings.

GOLDFINCH

THE WILD CANARY

(Figs. 35, 36)



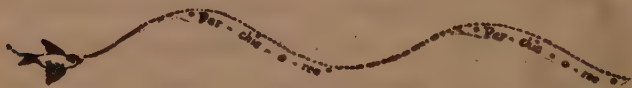
GOLDFINCH he may be during the summer, but when he replaces his gay black and yellow costume with one of olive-brown he should change his name also if he expects to be recognized by it. His nature

he never changes, and summer or winter he is always the same sweet-voiced, cheerful fellow, who calls his gay "per-chic-o-ree, per-chic-o-ree" as he goes bounding through the air.

We may not receive a call from Goldfinch at our feeding shelf, but if we will leave a few old seed-filled sunflowers hanging on their stalks in the garden, he and his merry troop will surely visit them. In April they frequent the maples to take toll of the fast swelling buds. Then the very trees seem musical. One can well imagine that every bud is bursting with song as the birds chatter happily while feeding. The males are now changing the olive winter plum-

age for their gold and black wedding dress and will soon be true Goldfinches. It is this costume, together with their canary-like song, that has won for them the name of "Wild Canary." They are also called "Thistle-bird" from their fondness for the seeds of that plant.

The Goldfinch seems loth to give up his care-free, wandering life for the duties of housekeeping, and, like the Waxwing, roves about the country with a



THE GOLDFINCH LOOPS THE LOOP

troop of his companions long after most birds have families to provide for.

Perhaps he believes in a prolonged courtship for, although, as we have seen, he dons his nuptial costume in April, it is not until late June or even July that he and his mate build a home. This they place in bushes or more often trees, and make of fine grasses, strips of grass and moss, padding it as warmly with soft plant-down as though it were to be used in mid-winter rather than mid-summer. The three to six eggs are pale bluish white.

September

JUNCO

A WELCOME WINTER VISITOR

(Fig. 43)



SEPTEMBER, with its army of birds marching steadily southward, is an interesting but sorrowful month for the bird-lover. Birds which were rare or not seen at all when the migrating army passed us in the spring, may now often be found in numbers. This, too, is the season when young and inexperienced birds not infrequently lose their way; and we are, therefore, on the lookout for these "accidental visitants," as the ornithologist calls them. Perhaps we may see some bird which has never been found in our part of the country before!

While we therefore have keen enjoyment and excitement in watching the host of Warblers, Vireos, Flycatchers, Thrushes and others go by, we are saddened by the thought that for the succeeding six or seven months our woods will not know them.

Soon the leaves will come fluttering gently down-

ward for a short time to carpet the wood-path with bright colors, and the birds, deprived of their shelter and food, will seek a home where frost is unknown.

How pleasant it is then to know that among all these travelers there are some which have come to pass the winter with us. Of these "Winter Visitants," Junco is the most welcome. I first hear his familiar, kissing "tsip" about the end of the month, and there, sure enough, on the ground near a group of evergreens, is a company of the little gray-coated, white-vested birds, which have just arrived from their summer home in Canada.

As I approach, with a twittering note, they fly into the lower branches of the neighboring trees, showing as they go their white outer tail-feathers, the banner they always spread in flight. They call a contented "true-true-true" to me as I pass, and I answer, "Yes, surely it is 'true' that you have come back to cheer us during the winter."

A little later in the season, Junco comes to our dooryard and, until he leaves for the north the following April, he is one of the most frequent guests at our feeding-stands. Not long before he goes, we may hear the simple little trill with which Junco greets the coming of spring.



JUNCO.

Length, 6.25 inches. *Male*, upper parts, throat, and breast slate-color ; belly and outer tail-feathers white. *Female*, similar, but plumage more or less washed with brownish.

BROWN CREEPER

THE BARK BIRD

(Fig. 59)



THE Brown Creeper might well be called the Bark Bird. He spends his life on the bark, builds his nest behind a slab of loose bark, and looks himself like a piece of bark. He might be a feathered mouse, so truly does he *creep* up the tree-trunks, winding his way around, and pausing only long enough to pick out an insect's egg here and there. When he reaches the lower limbs he is apt to drop lightly down to the base of a neighboring tree and the moment his toes grasp the bark he begins his upward journey. What a preoccupied, near-sighted manner he has! How intent he seems upon his search! One never sees him resting. He reminds me of a character in mythology named Sisyphus. This poor man was condemned to push a great stone up a hill; he toiled faithfully, but always, just before he reached the top, the stone slipped from his grasp and rolled

back to the bottom. Then he had to begin again.

So the Creeper appears constantly to be working at some task he never can finish. He is persistent and faithful, but fate seems against him. He spends his life trying to climb trees, but when he reaches the first branches he slips and falls and has to start from the bottom again.

This view of his place in nature would doubtless



THE BROWN CREEPER'S PROBE-LIKE BILL AND POINTED STIFFENED
TAIL-FEATHERS

surprise the Creeper. His measure of success would probably be found in the numbers of insects, eggs and larvæ his patient gleaning discovers; and when we see how well his stiff tail and curved bill fit him to pursue his special calling, we cannot doubt that he is one of the most valuable guardians of the bark.

The Creeper is as uncommunicative as he is diligent. A faint, thin, high *screeeping* is the only note we shall hear from him in winter, but in late spring he has a short song of four notes which

has been described as exquisitely pure and tender.

From northern New England northward is the Creeper's summer home. He leaves it late in September to start south with Junco, Red-breasted Nuthatch, and others to winter from New England to the Gulf.

WHITE-THROATED SPARROW

A FEATHERED FIFER

(*Figs. 45, 46*)

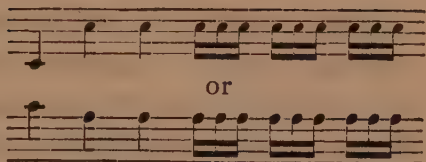


WHEN we can address a foreigner in his own language, we at once establish more friendly relations with him than it would be possible to create if we had to talk with the aid of an interpreter.

So I always feel better acquainted with those birds whose language I can speak than with those whose tongues I cannot master. It is true that I rarely know the meaning of what I say, but the birds seem to understand; at least, they reply, and that makes a bond of sympathy between us.

Any one who can whistle can acquire White-throat's language. His voice is clear, high, and sweet, and the intervals between his notes so closely agree with those of our musical scale, that his songs can be written on our staff. Here are two which I often hear. There are many

variations of this theme, but the rhythm is always the same. The words "Old Sam Péa-body, Péa-



TWO OF WHITE-THROAT'S SONGS

body, Péa-body" are sometimes used to express it and, for this reason, White-throat has also been called Peabody Bird.

White-throat comes from his summer home in northern New England and Canada with Junco, late in September. In sheltered places where food is available, he and others of his kind will remain with us all winter.

Those that go as far south as Florida will visit us again in April and May. White-throat is therefore most numerous during his fall and spring migrations. For a few days after his arrival, in late September, White-throat seems to be resting from his journey and remains quietly with his traveling companions in some brushy place in the woods. But when I whistle a few words to them in the language of White-throats, they all appear much interested and hop up to some look-out perch curious to see who is speaking.

Perhaps some bird will reply in a rather weak, shaky voice a little off the key. Even mature birds

never sing as well in the fall as they do in the spring. Most birds, indeed, sing little, if at all, at this season. Probably many of the songs we hear in the fall are those of young birds trying their voices.

We all know that a young rooster's first attempts at crowing are ridiculously unlike his father's resounding "cock-a-doodle-doo." The song of no young bird is so laughable as a cockerel's half-formed crow, but it may be quite different from that of his parent.

White-throat's notes, however, are unmistakably those of his kind. He seems to improve rapidly and while his song is not so loud, clear, and ringing as it will be the following spring, it is nevertheless a welcome addition to nature's small autumnal chorus.

White-throat's call-note, "chink," has been well-likened to the sound produced by a marble-cutter's chisel. When you are near the bushes to which White-throat and his companions are coming for the night, you will hear the birds calling to one another, and can easily imagine that a dozen or more workmen are busily plying the chisel to finish the day's task.

We shall have no difficulty in recognizing the older White-throats by the throat-patch which gives them their name, together with a faint yellow spot at the front end of the whitish line that passes over

the eye. In young birds (No. 46) these markings are not so well-defined; but when we see a Sparrow that calls a sharp "chink" and sings "Péa-body-péa-body-péabody," we may be sure that it can be no other than White-throat.

PURPLE FINCH

A WANDERING MINSTREL

(*Figs. 32, 33*)



WHEN a company of Purple Finches patronize our feeding-stand, our garden seems bright with color and cheery with song. It is as though all the English Sparrows had been dipped in red ink or streaked below with dusky and taught to sing.

In some parts of the west and southward into Mexico, the House Finch or Linnet, a near relative of our Purple Finch, seems as much at home in the heart of large cities as though he were an English Sparrow. It is most surprising to see a brightly colored male perched on a telegraph wire above a street thronged with vehicles, singing his flowing, musical warble seemingly with as much pleasure as though he were in a blooming apple orchard.

Unfortunately our eastern bird is not so fond of the haunts of men. Usually he is but a voice in the air. We hear his flight-call, "Creak, creak," as he

passes over. Perhaps he may pause for a moment on the topmost branch of some tall tree and sing a bar or two; but soon he is off again—"Creak, creak."

Just where he goes one cannot say. Nor can one tell when he will come. He is like a restless traveler, ever on the go and not content to stay long at one place.

About the middle of May he gives up his roving life for a time and settles down to housekeeping. If we have evergreens on our lawn, he may honor us by accepting one as a site for his nest of twigs, grasses and rootlets with its lining of fine hairs.

The four to six eggs are blue, spotted about the larger end with blackish.

All the young birds, whether male or female, will wear the streaked sparrow-like plumage of their mother; but the whitish line over the eye will always distinguish them from any of our real sparrows. The young male wears his streaked costume through the winter and the following spring dons the rosy dress of the mature bird.

CEDAR WAXWING

A BIRD OF GENTLE WAYS

(*Fig. 40*)



F the Waxwing had a voice to match his dress and disposition, he would be among the most famous of birds. His plumage lacks the brilliancy of Tanager or Hummingbird, but its exquisite shading, trim elegance, tasteful and unusual adornments make it even more pleasing to the eye than one of gayer hues. Furthermore, a Waxwing's clothes, so to speak, always fit him and he wears them with an air of refinement which adds to the dignity of his appearance. His distinction of manner is increased by a crest which he uses as expressively as a horse does its ears.

The Waxwing's habits are in keeping with his appearance. He is a quiet, gentle, well-mannered bird, and is apparently always on excellent terms with others of his kind. Doubtless for this reason Waxwings always show a fondness for one another's

society. One rarely sees a single Waxwing. Usually they are found in small flocks, the members of which associate so closely that they seem to act as one bird. When they alight in a tree they perch closely together, often sitting in a row on the same limb, like Parrakeets. When they leave, they take wing at the same moment and fly in close formation.

Perhaps it may be their attachment for one another that delays their pairing and establishment here and there as separate families. As a rule, they do not begin to nest before the middle of June, a date when most of our birds have families on the wing. Only the Goldfinch nests later.

While a fondness for cedar berries is responsible for the Waxwing's first name, he shows no preference for cedar trees as a home site. Indeed, the large, well-formed nest is usually placed in a shade or fruit tree often on our lawn.

The eggs, which number from three to five, are quite unlike those of any other of our birds. Their ground color is pale bluish gray, which is thickly and distinctly spotted with black and dark brown.

The Waxwing has no real song and his faint, lisping calls and string of beady notes are probably uttered by both sexes. Nor does the male differ from the female in color. Not every individual, it

is true, has the little red sealing-wax-like tips on the inner wing-feathers (and rarely tail), which give the bird its last name. Probably those which lack this peculiar and distinctive mark are not wholly adult. It is rarely worn by nestling birds, which further differ from their parents in being lighter colored and strongly streaked below.

The Waxwing does not restrict his diet to the berry of the tree after which he is named. He seems fond of all wild fruits and was not slow to add cultivated ones to his bill-of-fare. He is also fond of various kinds of insects, particularly the canker-worm so destructive to our elm trees, and no one who knows of his valiant service as a protector of our shade trees will deny his well-earned right to a share of our cherries and strawberries.

Toward midsummer he becomes one of the most expert and graceful of flycatchers and from a well-chosen perch swings out into the air or darts upward after passing insects.

Notwithstanding his gentle, quiet ways, the Waxwing is an adventurous and erratic traveler. He follows no regular routes and time-tables such as guide the journeys of the Warblers and most migrants, but apparently wanders wherever the mood prompts him to go. Wholly absent some winters,

he may be present others. Here to-day, he has gone to-morrow. But doubtless he has his own reasons for coming and going, and it is pretty safe for us to believe that among them the question of food takes first place.

GOLDEN-CROWNED KINGLET

OUR SMALLEST WINTER GUEST

(*Figs. 62, 63*)



WE think it wonderful that the Hummingbird, our smallest bird, should go as far south as Central America to spend the winter. But is it not equally wonderful that the Golden-crowned Kinglet, next smallest in size, should brave the winters of New England?

He has a body no larger than the end of your thumb, but it is covered with so thick a coat of feathers that Golden-crown is doubtless warm and comfortable sleeping in the depths of an evergreen even when the thermometer registers below zero.

Golden-crown belongs to a small but hardy group of birds, all of which live in the more northern parts of the world. Golden-crown himself is not found in summer south of northern New England, except on the higher, colder parts of the Alleghenies, on which he is found as far south as North Carolina.

It is not only Golden-crown's endurance which makes him remarkable, but also the size of his family. Although the smallest of our Song or Perching Birds, he lays, as a rule, a larger number of eggs than any other; as many as ten are commonly found in the great purse of green moss which this active little bird builds for a nest in an ever-green tree sometimes as high as sixty feet above the ground.

Golden-crown comes to us from the north late in September. A few birds remain during the winter, traveling in small companies which are often associated with Chickadees. They are restless, active little explorers of twig and bud, about which they flutter in their never-ending search for insects' eggs and larvæ.

Their high, thin "ti-ti-ti" may be heard only by attentive ears. Hoffman writes: "In March and April the males continue the lisping note, put more and more power into it, and then by a descending trill fall, as it were, from the height to which they have scaled—this is the song of the Golden-crowned Kinglet."

Both sexes wear a crown. That of the male is flaming orange bordered by yellow and black. That of the female—shall we call her Queenlet?—is only yellow with a black border.

SCREECH OWL

THE FEATHERED CAT

(*Figs. 13, 14*)



LOOKING from a second-story window, in the dusk of a winter evening, I saw on the nearby ridge of the piazza roof what, at first glance, seemed to be a queer, little hunched up feathered cat! Its erect ears pointed slightly outward, its big yellow eyes glared at me and, with a sharp turn of the head, followed every move I made. Slowly I raised the window for a nearer view when, behold! my feathered "cat" spread its wings and flew noiselessly into the neighboring spruces. One never forgets one's first real meeting, face to face, with an Owl.

Probably there are but few homes in town or country which have not a pair of Screech Owls living near them. Only a short time ago while walking at night-fall to my home in a large city, I saw one fly a short distance down the street and alight in a

leafless maple. I wondered whether any one else knew that we had this "original inhabitant" still abiding with us.

A pair of Screech Owls once lived directly over my study in a gable which they entered through a round hole placed just below the peak. This formed their doorway, and night after night it was occupied by one of the birds, who, with half-closed eyes, looked out sleepily over the gradually darkening world.

I could always tell when he sailed silently out in search of his breakfast, by the commotion he aroused among other birds. Robins, in a frenzy of fear, shrieked their sharp alarm note, while hesitating actually to attack the unoffending cause of their excitement; Wood Thrushes uttered their clear "pit-pit" uneasily; Catbirds protested, and the Red-eyed Vireos complained nasally.

Often I have gone out to see what all the noise was about, usually to find the Owl maintaining a dignified silence, or snapping his bill defiantly in the depths of a tree, and wanting only to be left in peace. Or, braving the open, he would leave the shelter of the foliage to drop down on the lawn for a grub or even to pick from a tree trunk a cicada just emerging from its shell-like case.

As the light failed the mob dispersed, and relieved

of their unwelcome attention the little Owl raised his quavering voice in song; a long-drawn, high, tremulous whistle, on a descending scale, sometimes followed by a mellow refrain. It is far from a "screech," this plaintive note; and while it can scarcely be called cheerful, it harmonizes well with the quiet of the evening and the spirit of the hour.

Heard by persons to whom the little Owl is a stranger and who have no sympathy with him and his ways, this somewhat mournful call is considered a note of ill-omen; but when we learn that in addition to destroying a large number of harmful grubs and insects, Screech Owls are also expert mousers, we realize that we may consider ourselves fortunate rather than unlucky to have them make their home near ours.

About the middle of April the Screech Owl lays from four to six white eggs in a hollow tree, or possibly in a nesting box or log we have erected for the use of Flickers. The birds go about their family duties so quietly that we may not know of their presence near us until they "bring out" their family. Then, suddenly, the place seems to be overflowing with Screech Owls. They sail from tree to tree and from the branches overhead look down upon us after the curiously solemn manner of Owls. The young Owls still wear their nestling costume of soft

downy feathers lightly barred with blackish and quite unlike the streaked costume of their parents. Some of the latter are gray while others are reddish brown, but this variation in color (see Figs. 13 and 14) has no relation to either age, sex, or season, and its cause has never been learned.

Whether gray or reddish we may always know the Screech Owl by its small size in connection with the conspicuous feather-tufts which are commonly called "ears."

FIELD BIRDS

III

FIELD BIRDS



ALTHOUGH their power of flight enables birds to move quickly and easily from place to place and, if need be, to travel thousands of miles, many species in their wanderings are restricted to a certain kind of territory. Thus, while Horned Larks and Snow Buntings *might* enter the woods, we should no more expect to find them there than we should daisies or clover. On the other hand, the Ruffed Grouse and Winter Wren are as closely confined to the forests as the partridge berry or moccasin flower. Such birds and flowers are termed specialized; that is, they have become so closely adapted to life under certain special conditions that they can live only where these conditions are present.

Birds which are not so closely governed in the choice of haunts and food, are spoken of as generalized in habit. The Crow, for example, is a generalized bird. He is found in both fields and woods, on the seashore and in the mountains. He usually

feeds on the ground, but he may rob nests or take frozen apples from the trees, and his bill-of-fare varies as widely as the difference between eggs and apples indicates.

Generalized species are called adaptive, because they can adapt themselves to life almost anywhere. As a rule they are the successful species and are far more abundant than those which require a particular kind of haunt, nesting-site and food. Just as a man who can "get on well" anywhere is much more apt to succeed than one who is unhappy and uncomfortable unless he can have things exactly as he wants them.

The secret of the English Sparrow's success is his generalized habits. He seems equally at home in the city or country, on cobble streets, or in the barnyard; he eats almost anything and appears to relish it, and any place that will hold his nesting material suits him for a home.

In attempting to classify birds by their haunts we have no difficulty with the specialized species, but it is not so easy to place the generalized species where they belong. Of the birds which we include in this section, the Crow, Goldfinch, Siskin, Redpoll and Bob-white may be found at times in the woods as well as in the fields, but since we will doubtless see them more frequently in the open, we may class them as Field Birds.

THE CROW

A BIRD WITH FEW FRIENDS

(*Fig. 19*)



Y his enemies the Crow's character is painted as black as his plumage, but before we condemn him I should like to hear the verdict of a jury of Crows. We, for example, would not like to have the buffalo or Wild Pigeon or Carolina Paroquet, or any other animal that man has exterminated, paint our character. Even the house fly and mosquito could prove that we were heartless murderers!

So we see that Crows must be judged by the standards of Crows, just as men are measured by the standards of men.

From this point of view I find much to admire in the Crow. It is true that he takes our corn and robs birds' nests of their eggs and young. But if a wild Crow should show as much confidence in me as Chickadee does, I should welcome his friendship and consider myself honored among my kind.

Unfortunately for the Crow this is not the attitude of the world toward him. By both man and bird he is treated as an outlaw. The former denies him the protection his laws are designed to give other birds, the latter seems to consider him a great black ogre with whom no self-respecting bird would associate.

Whether the Indian treated the Crow as an enemy I do not know, but ever since the white man came to this country his hand has been raised against this bird of sable pinion. The Indian has long since disappeared from most of the country in which he formerly thrived, but the Crow is doubtless as abundant to-day as he ever was. Unable to kill Crows as readily as he did savages, civilized man marks his indignant if harmless protest against them by placing scarecrows in the fields from which the birds still take their toll. This consists not alone of corn but also of injurious grubs. In the pastures and grasslots the Crow also captures countless grasshoppers, so that he is not without some value to man. Indeed, those who have most closely studied his fare, tell us that he does quite as much good as harm.

The Crow owes his remarkable success in life to his intelligence. He may be over-suspicious at times, but you can't fool him often. When it comes to a matching of wits in the woods he will usually out-

guess you. If the would-be crow-killer should be about to get within range of some inexperienced or unsuspecting bird, he is almost always warned of danger by his companions.

It is to this good fellowship, and to their loyalty to one another, that Crows owe their comparative safety from attack by man.

Whether, as has been stated, they post sentinels when raiding a corn-field, I do not know, but that they have a note of alarm which is understood by all other Crows is beyond question. The note of a telegraphic instrument is all on one key, but there is no limit to its power of expression. So, while we think of the Crow's language as containing the one word "caw" he, nevertheless, can convey a surprising number of meanings with this syllable. There are long caws and short caws, rolling caws and rasping caws; phrases of two caws and phrases of four caws, and all apparently stand for different things. When the Crow hears an Owl, for example, he utters three short caws, which is apparently a rally call, and soon a dozen Crows are flying about overhead where but one was before. The discovery of danger is announced by a series of hurried caws and, without stopping to ask questions, every Crow within hearing takes to his wings.

If man could not talk he would be but little higher

in the scale of life than some animals. It is his ability to communicate with his fellows that has helped to develop his mind. So perhaps we may believe that the Crow's intelligence is related to his powers of speech.

If Crows are avoided by other birds, they at least show a great liking for the society of one another. It is only when nesting that Crows are not found in companies. Then they scatter to build their large nests of sticks lined with cedar or grape-vine bark, grass, moss, etc., usually about thirty feet above the ground. They are very silent near their nests. One never hears a Crow voicing its protest against a trespasser as the Robin and Catbird do.

The four to six eggs, which are laid about the middle of April, are bluish green, thickly marked with shades of brown.

Perhaps the Crow does not nest in colonies because he is too wise to place his eggs, as it were, all in one basket, where they could be found and destroyed more easily than if he were to hide them at widely separated places. However this may be, as soon as the young can fly the birds gather in loose companies. From the northern boundary of the United States southward Crows are found throughout the year; but most of those in the more northern states go to the Middle States for the winter. In

October we may see them migrating by day, stringing across the sky, for Crows never fly in such close-massed flocks as do Redwings or Grackles.

During the winter Crows return every night to roost in the same woods. Such a great Crow lodging-house may contain as many as 200,000 Crows, and is one of the most remarkable sights in American bird-life.

In the morning the birds fly out to every point of the compass to forage for food along the beaches, on the uplands, or in old cornfields where scarecrow, more disreputable looking than ever, still spreads his ill-clad arms in silent, unheeded warning.

THE SNOW BUNTING AND TREE SPARROW

TWO FRIENDS OF THE FARMER

Snow Bunting

(Fig. 57)



IF a snow flake should take the form of a bird, I am sure it would become a Snow Bunting. The white in the Bunting's plumage is so conspicuous that when we see a flock blown before the wind they suggest a flurry of snow. The very spirit of the north seems embodied in them. They not only look like snow but they seem to love it. They come to us with the snow in the fall and leave with it in the spring to return to their summer home in the Arctic regions.

Always we see them in flocks, on plains, wide-spreading fields, or along the shores of lake or sea. They walk or run, and their long hind toe-nail leaves a track in the snow which can be mistaken only for that of the Horned Lark or Longspur. In all

three of these birds the hind-toe is evidently not intended for grasping, as it is with the Robin, and doubtless for this reason they rarely perch in trees or similar places.

As we might surmise from its terrestrial habits, and short, strong bill, the Snow Bunting is a seed-eater. Dr. Judd, of the U. S. Department of Agriculture, found as many as 1,500 weed seeds in the stomach of a single Snow Bunting. Like the Tree Sparrows, therefore, this visitor from the far north is not only a welcome, but a very useful guest. Unfortunately he is rarely found south of Pennsylvania. What a harvest of seeds he would find in the more southern states where the snowfall is too light to hide the weed stalks!

Hoffman describes the notes of the Snow Bunting as a "high, sweet, though slightly mournful 'tee or tee-oo,' a sweet rolling whistle and a harsh 'bzz.'"

Tree Sparrow

(Fig. 44)

Early in October, some weeks before our familiar Chipping Sparrow leaves for the south, a cousin of his comes from the north to remain with us until April. The two birds resemble each other in general appearance, but the Tree Sparrow is somewhat larger and heavier and in the center of his breast

he wears a small, dusky badge, while the Chipping Sparrow is unmarked below.

In voice and character, the cousins are quite unlike. Chippy's call is an insignificant little "chip" which would attract the attention of no one but a bird student; but the Tree Sparrow's winter notes are a crisp, merry tinkle. The birds are usually in companies and when hunting for seeds in old weed-stalks which stick up above the snow, their happy, conversational chatter makes one think of a lot of children gathering nuts. A short time before they leave us to return to their summer home in Canada, we may hear their canary-like song.

We have already seen (p. 5) how much these care-free little seed-eaters do for a farmer.

REDPOLL AND SISKIN

A PAIR OF WINTER WANDERERS

Redpoll

(Figs. 47, 48)



WHEN the world of birds was a fascinating mystery to me, filled with strange forms and stranger voices, about which no one seemed to know anything, I saw, one winter day, a flock of small birds feeding on the catkins of a white birch. They seemed to be about the size and general color of Chipping Sparrows (one of the few birds I knew by name, and which I called "Chippy"), but when I got near enough to see them clearly I discovered, to my surprise, that they wore red caps! Some, indeed, had red vests! What could they be? Where had they come from? With neither books nor "bird" friends to consult, both questions remained long unanswered; so I named the birds "Red-capped Chippies," and by that name I think of them to this day.

Even now, their coming is a mystery. We can name almost the exact day when the Flycatcher, Warbler, or Vireo will come back to us from the distant tropics, but no one can tell when the Redpolls will appear. Years may go by and not one be seen; then, without warning, some October or November flocks of them will arrive.

They visit the fields for weed-seed and the birches to get seeds from the catkins, calling and acting not unlike Goldfinches and Siskins. Usually they remain until early spring and then return to the boreal regions whence they came.

There, in early June, in a low tree or tuft of grass, they build a nest of dried grasses and moss, and line it with hair, feathers and plant-down. The eggs number from four to six and are white, tinged with green or blue, spotted with reddish brown.

Siskin

(Fig. 55)

The Siskin seems midway between the Redpoll and the Goldfinch. He has the streaked dress of the former, while the tinge of yellow in his plumage and the wing-bands of this color, which he displays in flight, mark his relationship to the latter.

The coming of the Siskin, like that of the Redpoll, cannot be foretold, but since his summer home in

the evergreen forests of northern New England and Canada is nearer than that of the Redpoll, he visits us more frequently than that far northern bird. He also goes farther south, sometimes reaching Florida; while the Redpoll rarely goes beyond Virginia.

To his call-note, "e-e-e-p," the Siskin adds another much like that of his Goldfinch cousin. He sings both on the wing and when at rest, but has not so good a voice as the Goldfinch. Seeds of weeds, catkins and cones form his fare, and at mealtime he is often to be found with the Redpoll and Goldfinch.

The nest of twigs and rootlets, padded with plant-down, is built in evergreens. The four pale bluish white, thinly-spotted eggs, are laid from April to June.

HORNED LARK AND LONGSPUR

TWO RUNNERS ON SKIS

Horned Lark

(Fig. 42)



WE all know that the Horned Lark cannot write, but if we look in the right places we may sometimes see his "mark" imprinted on the snow, when we know as surely as though it were written, that either a Horned Lark, or Snow Bunting, or the rare Lapland Longspur has been before us. All three live on the ground, and all three have the long hind toe-nail which belongs to walking, terrestrial birds, and is quite unlike the curved, hooked hind toe-nail which gives most perching birds a strong, firm grasp of the limb on which they are resting.

During the winter Horned Larks, or, as they are also called, Shore Larks, live in flocks which frequent broad, open fields, beaches and tidal flats. When disturbed, they bound lightly into the air, uttering a high, thin, "tsee-tsee," and swing off to some new

feeding ground, or, hesitating a moment, as if their interrupted meal were too good to leave, they drop back to the place from which they started.

Most of the Horned Larks that spend the winter with us leave early in April to return to their summer home in the Arctic regions. Those that remain with us during the summer are smaller and paler, with a white instead of yellow forehead and with little or no yellow on the throat. This, the Prairie Horned Lark, is the first of our song birds to go to housekeeping, the three or four greenish white, speckled eggs being laid as early as the first week in March. Although the Horned Lark is a cousin of the Skylark, its song is a weak, unmusical twitter which bears but small resemblance to that of its famous relative. Perhaps because it lacks the inspiration which carries the Skylark far up into the sky, there to pour forth its song, the Horned Lark sings from a humble clod of earth as well as while soaring.

Lapland Longspur

If we find in a flock of Horned Larks one, or perhaps two or three darker birds, we will probably have seen that rare winter visitor from the far North, the Lapland Longspur.

Possibly because he loves company and cannot find

enough individuals of his own kind to afford him companionship, the Longspur also associates with Snow Buntings. He resembles both Lark and Bunting in general habits, but his reddish brown wings, the absence of "horns" and of yellow markings, and



LAPLAND LONGSPUR

the presence of a blackish patch on the breast, distinguish him.

The Longspur's winter notes are described as "a harsh and rattling chirr, less musical than the roll of the Snow Bunting," and a sweet "tyee," which corresponds to the "tee" of the Bunting.

On our western plains Longspurs occur during the winter in such countless numbers that after a severe storm in southwestern Minnesota, on March 13, 1904, several million Longspurs were found lying on the snow-covered earth dead or dying.

NORTHERN SHRIKE

THE BUTCHER BIRD

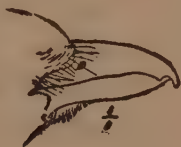
(Fig. 56)



THE author of the "Just So" stories might change my heading of "Northern Shrike" to "The Sparrow that Tried to Become a Hawk." Here is a bird which was born in the group of *Passeres* (*Passer*—A Sparrow) or Perching Birds; who is a relative of the gentle Red-eyed Vireo (sometimes called Preacher), but who shows such astonishingly bloodthirsty habits that he is commonly known as the Butcher-bird. No larger than a Grosbeak, with a feather-suit cut on much the same pattern, and with feet fitted for perching (not tearing), only his strong, hooked bill shows any approach to the structure of a Hawk.

But if he could not make his form hawk-like, he has done his best to make his habits so. Unsociable in disposition, he seems to avoid the company even of his own kind, and the only interest he shows in

other birds is when, perched solitary and alone, he awaits an opportunity to kill them. More persistent than a Hawk who, failing in its swoop on its intended prey, will let it escape, the Shrike hangs on the trail of its victim, making every dodge and turn, following closely through bushes and out again, until at last the capture is made and his sharply hooked bill does its fatal work.



THE HAWK-LIKE BILL OF THE SHRIKE

Then he discovers that after all he is a Sparrow! In place of the strong, large feet with their long, curved talons, he has only the perching feet of his relatives. Much too small, they are, to grasp his prize in true Hawk-like fashion while he tears it with his bill. What is to be done? The Shrike, in changing his disposition and with it his expression, may also have changed his face and with it his beak, but unable to alter his feet he has had to find a substitute for those sharp, serviceable claws of his model, the Hawk. So, gathering the captured Redpoll, Siskin or Junco in his feet (which at least are powerful enough for that) he seeks some favorable bush

or tree where, with much tugging and fitting, the bird is stuck upon a thorn or hung from a close-forked branch. Then the well-named Butcher-bird can help himself at his leisure.

Not only birds but also mice are found on the Shrike's shambles, and often he wantonly leaves them there, vain sacrifices to the instinct which prompts him to destroy even when he is not hungry.

There is one Sparrow-like trait which the Shrike has not succeeded in discarding. A member of the Order of Songbirds, he must still sing; and strange it is in early spring to hear this cut-throat and hangman among birds warbling a song which is not unlike that of a Catbird. One would as soon expect music from a Hawk itself.

The Shrike passes the summer in northern Canada and comes to us in October to remain until early April. One rarely sees more than a few individuals during the winter, and the species does not often go south of Maryland.

He has a smaller southern cousin known as the Loggerhead or Migrant Shrike, which in summer nests as far north as southern Canada and winters from Maryland southward.

The Loggerhead lives chiefly on grasshoppers and other insects which it detects at a distance of thirty yards or more from its perch as they crawl



NORTHERN SHRIKE.

Length, 10·30 inches. *Adult*, upper parts gray ; tail black and white ; under parts white, with blackish bars ; lores grayish ; ear-coverts black. *Young*, similar, but plumage washed with brownish.

about in their grassy jungle. These it impales upon thorns and also upon the barbs of wire fences, which, it might well be imagined, were erected for the double purpose of supplying it with perch and meathook.

Only an expert can tell a Loggerhead from a Northern Shrike in nature; but when the birds are seen at close range it will be observed that the Loggerhead has the forehead blacker than the Northern Shrike, and the underparts are usually whiter, immature individuals of the northern bird having fine, wavy, brownish cross-lines on the breast.

While therefore difficult to distinguish one from the other, the black and white and gray plumage and characteristic flight of Shrikes quickly distinguish them from our other winter birds. They are not strong fliers, a number of rapid wing-strokes being followed by a short sail, as though the bird were alternately running and sliding, and the flight almost always ends by an upward swing to the highest part of whatever the bird alights on, where, like a bird of prey, it may keep a sharp outlook for its quarry.

MEADOWLARK

A HERALD OF SPRING

(Fig. 23)



THE Meadowlarks that remain with us during the winter live in flocks in the marshes or lowlands where the tides, or a flowing spring, prevent the earth from freezing. In such places they can probe the ground with their long, strong bills for grubs and worms. The first Meadowlark I can remember seeing was feeding on a patch of vivid green grass which bordered a snow-surrounded spring oozing from a hillside. It was a bit of spring set in the very heart of winter and the bird's rich yellow breast gleamed like a flower against the green background.

Evidently I saw this bird before he saw me, for the Meadowlark seems careful not to show his brightly colored vest and black cravat, but turns his neutral-toned back toward the observer.

Traveling on horseback through a part of Cuba

where Meadowlarks were common along the highway, I observed that all the birds perching on the fences by the roadside turned their backs toward me as I passed. Try as I would, I could not see their very differently colored underparts. Finally I came to one bird who faced me squarely and, turning his back toward the field behind him, permitted me to ride by without flying. Here, I said to myself, is a young and inexperienced bird who does not realize how much more conspicuous his breast is than his back, with its dull earth-brown, streaked with dead grass-blades and stems; but, looking further, I saw a Hawk coursing over the field just beyond the Meadowlark. The bird, too, had seen him, and evidently choosing the lesser of two evils, had turned his strongly-marked breast toward me while the neutral-tinted back was presented to the Hawk!

While the Meadowlark, like all walking birds, spends most of the time on the ground, where it secures its food and builds its home, it also frequently perches in trees. When on the ground in the grasses, like Bob-white, it often will not fly until one almost steps upon it. Its resemblance to a Bob-white at such times is so great that it is sometimes called "Marsh Quail"; Quail, we remember, being a common name of Bob-white. But the white outer tail-

feathers which the Meadowlark flashes as it flies will always distinguish it from Bob-white.

Let us watch our bird as, first flapping, then sailing, then flapping again, he alights in a tree nearby,



MEADOWLARK (UPPER FIGURE) AND BOB-WHITE

"The white outer tail-feathers which the Meadowlark flashes as it flies will always distinguish it from Bob-white."

uttering a sharp note and metallic twitter while nervously flitting his tail and showing its white feathers. Alert and suspicious he seems now to realize that his brown-streaked cloak no longer conceals him and, trusting to his wings instead of to his protective

colors, he takes flight before we are within forty yards of him.

In March the Meadowlarks which have passed the winter with us will leave for more northern homes, and their places will be taken by new arrivals from the south.

The Woodpeckers and Ruffed Grouse are the drummers among birds, but the Meadowlark plays the fife. High, sweet and clear his notes ring like a clarion call through the chill March air, and we stop to greet the feathered fifer—true herald of spring. Later in the year, perhaps when his mate is near, he sometimes sings while flying; a warbling, twittering song quite unlike that with which he announces the birth of a new year.

Meadowlarks have been known to nest within a few yards of occupied houses, but as a rule they show very little confidence in man; a fact I have always regretted, for I am sure that these strong, wholesome, hardy birds would be well worth numbering among one's friends. But they prefer their own company to ours, and usually nest where they are free from intrusion. The uncut and unused portions of golf courses make admirable meeting places for Meadowlarks. Here, in early May, they construct their arched nests of grasses and lay four to six white eggs, spotted and speckled with brown.

BOB-WHITE

A BIRD OF GOOD CHEER

(*Figs. 1, 2*)



WITH most birds family life lasts only during the nesting season. This includes the time when the young are helpless and entirely dependent on their parents for food, and also a period of variable length when, under the care of their parents, they learn what to eat, where and how to find it, how to avoid the enemies of their kind, where to sleep, and the daily routine of their lives.

After this preparation, and having exchanged their nestling suit for their first winter costume, family ties are usually broken and the young become independent and shift for themselves. Some birds join great flocks of their own species, as do the Blackbirds, Starlings, Shorelarks and Snow Buntings. Others, like the Juncos, White-throated, and Tree Sparrows, live in rather scattered companies which are probably associated day after day;

while a few, like the Shrike, live solitary and alone.

But the Bob-white family is too happy to be separated. The children left the nest soon after leaving the egg, and have become accustomed to traveling about with their parents. They do not migrate and doubtless do not therefore feel that restlessness which induces other birds to leave their home.

Day after day, therefore, they are never more than a few feet apart, feeding contentedly side by side from the wood borders, through the surrounding brush lots into the stubble fields, resting in the hedgerows at noon and gradually working back toward their sleeping place in the evening. Then they all get, as it were, into one bed, roosting in a tight little circle on the ground, tail to tail, heads out, so that if sudden flight should be necessary they could all take wing without danger of a collision.

Sometimes the falling snow gently spreads a white covering over the sleeping birds, who, if there be no fall in temperature, can easily throw it aside in the morning. But should the snow be succeeded by a drizzling rain, which freezes as it falls, the birds are imprisoned and their bed becomes their grave.

I have never flushed a flock of Bob-whites during the night, but I can imagine that it would be a very nerve-trying experience for all concerned. It is cer-

tainly startling enough to walk into a covey during the day.

Bob-white's plumage represents the best type of what is termed protective coloration. That is, an arrangement of colors and markings which make the bird, when it is motionless, seem so like its surroundings that it is very difficult, if not almost impossible, to see it. Birds so colored rely upon their invisibility, rather than flight, to escape from their enemies.

We cannot, of course, believe that Bob-white does not hear us as we come crashing through the bushes. At the first sound he is doubtless on the alert, but trusting to his color he squats in his tracks and waits for us to pass. It is only when we almost step on him that he seems to lose faith in his protective suit and takes to his wings. Short, rounded wings they are, not designed to carry him far, but wings that can be moved quickly in a flying start. For after waiting until the last moment, it is necessary that Bob-white put on "full speed ahead" in the shortest possible time, and with a *whirring* roar he springs from the earth and shoots away like a bullet. Then, indeed, the family is so widely scattered that one wonders how its members ever find one another again. They do not, as a rule, perch in trees, so that sight is of no assistance, while the air route

over which they travel leaves no trail that could be retraced. But listen! What note was that? A soft, whistled "Whére are you? whére are you?" It comes first from the right, then from the left, then from far ahead near that thicket yonder. Let us answer it, "Whére are you? whére are you?" At once the responses come, and as we reply they draw nearer. Soon we hear low twittering notes and a moment later a Bob-white runs out into a nearby opening, head erect, looking eagerly here and there for the bird it was answering. Then others come and we quickly withdraw while they excitedly twitter their experiences to one another.

I once heard this "scatter call," as it is termed by sportsmen, from my window in the Museum of Natural History in New York City. Little thinking that a Bob-white could be its author, I nevertheless immediately answered it when, to my surprise, a Bob-white ran rapidly across the lawn and was actually about to enter the Museum door when, alarmed by visitors, he took flight and disappeared. Poor little fellow, I wonder did he ever find his way out of the great city into which he had so strangely wandered?

In April the flocks break up and the birds begin to pair, the males battling for their mates like diminutive game cocks, and challenging their rivals

with the ringing notes from which they are named: "Bob-white! Ah-Bob-white!" they call, or as the farmer puts it, "Buck-wheat-ripe?" What a cheerful call it is! No one, it seems to me, can hear it without a feeling of warmth in his heart for the bird whose voice so clearly echoes the joy of the season.

Late in May or early June the nest is made on the ground in the bushy border of some field, and as many as ten to eighteen pointed, white eggs are laid. Bob-white is an attentive husband as well as an ardent lover. Unlike most of the members of the order to which he belongs, he does not leave all the duties of the household to his wife, but takes his place on the nest when she is feeding; and when her tiny chicks appear he is apparently as much concerned as their mother in their welfare.

SPARROW HAWK

A HUMBLE MEMBER OF A ROYAL FAMILY

(*Figs. 7, 8*)



HAVE never known any one who made friends with a wild Sparrow Hawk. The bird will not come to us and he will not permit us to go to him. Still, if one has a young Sparrow Hawk, which has not yet

learned to fear man, it can be taught to trust him and, in a hawk-like way, apparently to like him. At least, it recognizes its master and when given its freedom, will come to a whistled call.

We must, however, remember that the Sparrow Hawk is a Falcon and hence belongs to the most distinguished family of Hawks. We have heard of falconry and how the Peregrine Falcon (which in North America is called Duck Hawk) was trained to hunt for the nobles of England, who alone were permitted to use this splendid, fearless bird of fleet wing and powerful foot. The Sparrow Hawk, therefore, while a very humble relative of the dash-

ing Peregrine, evidently possesses enough true Falcon temperament and intelligence to learn to associate with man.

The Peregrine preys exclusively upon birds, but the Sparrow Hawk, in spite of its name, feeds chiefly upon insects. The Peregrine goes boldly forth in search of food, and strikes his victim on the wing. The Sparrow Hawk believes in watchful waiting, and captures his quarry on the ground. Usually he has a favorite look-out on a dead stub, a telegraph wire, or some similar perch from which he can keep a close watch on the surrounding country. I have known them to use the staffs which mark the holes of a golf course. The flag fluttering at their feet might alarm most birds, but the Sparrow Hawk accepts it as though it was his own emblem of victory. Suddenly he starts and flies perhaps fifty yards or more directly to the ground where his marvelously sharp eyes have detected a grasshopper. If the insect should disappear he hovers on rapidly beating wings directly above the place in which he last saw it, waiting for another view and an opportunity to strike, just as the Fish Hawk and Kingfisher poise before plunging on their prey.

Woe to the unsuspecting grasshopper that crawls from beneath the protection of a sheltering leaf when the Sparrow Hawk is watching nearby!

Quickly the bird drops, seizes him in its claws and bears him to his perch, which serves as a table as well as a look-out.



SPARROW HAWK

"Hovers on rapidly beating wings"

The Sparrow Hawk is not common in the northern states during the winter, but increases in numbers during its northward migrations in March. It is always a bird of the open fields, and rarely visits the woods.

The Falcons, unlike most Hawks, build, as a rule,

no nest; but lay their eggs in holes in trees, or in openings or ledges in cliffs. The Sparrow Hawk selects a hollow limb, enters it from the top or through a knot hole or doorway drilled by a Woodpecker, and returns to the same place year after year. The three to seven brownish eggs are laid in April or early May. The young birds don at once the characteristic plumage of the male or female, as the case may be. The male, it will be observed (Fig. 7), has one bar in the tail, while in the female there are seven or eight. The female is streaked below from bill to tail with reddish brown, while the male has the breast tinted with brownish and the sides and abdomen spotted with black. One can always tell a Sparrow Hawk by its small size, brownish color, black markings about the head and habit of perching in exposed places in the open, and, with the aid of glasses, it is generally possible to say whether it is a male or female.

The Sparrow Hawk's call is a high, rapidly repeated "Killy, killy, killy," which in the south gives it the name of "Killy Hawk." This note is given on the wing, especially by the male in the mating season. I do not know whether it is also uttered by the female.

SHORT-EARED OWL

A MARSH MOUSER

(*Fig. 18*)



THE books tell us that the Short-eared Owl is nearly cosmopolitan. Which means that it may be found from the bleak Arctic tundra of Canada to the wind-swept plains of Patagonia, in Europe, in Asia and Africa, and on remote oceanic islands. What an incalculable number of years his kind must have lived to become so widely distributed over the earth's surface!

Unlike most Owls, he shuns the forest and lives in marshy, grassy places. During the winter we are apt to find him near the coast. He arises from the grasses almost at our feet and flies silently to some stump or little knoll to watch us as we approach.

Occasionally he may be seen by day beating low over the marsh in search of the meadow-mice which form the largest part of his fare. Perhaps the fact that these mice are active by day accounts for the Owl's diurnal habits.

Like the Marsh Hawk, the Short-eared or Marsh Owl nests upon the ground, laying four to seven white eggs in April. While the Short-eared Owl's "ears" are not ears, they certainly are short, being barely evident unless the Owl raises them; and this fact, in connection with its yellowish brown plumage, yellow eyes and the character of its haunts, will serve to identify it.

FOREST BIRDS

IV

FOREST BIRDS



THE tree-inhabiting birds like the Chickadee, Nuthatches and Woodpeckers, which come about our homes, are all forest birds which, when the forests disappear or decrease in extent, adapt themselves to the change and accept the trees of our orchards and gardens in place of those of the woods.

But there are other species which cannot make this change. Either they do not find the food they require near the home of man, or they are by nature too wild to take up their residence near ours.

The Screech Owl finds an old apple-tree just as good a home as a forest-growing beech. But the Great Horned Owl will not leave his forest dwelling; and when it disappears he seeks another like it. So if we want to see him and other true wood inhabitants, we must go to their haunts.

While we cannot value too highly the friendship of Chickadee, Downy and Nuthatch, it is well that some birds should express to us the spirit of the wilderness and forever be associated in our minds with the mystery of the forest.

THE HAWKS

OUTLAWS AMONG BIRDS

(*Figs. 4-6, 9-12*)



AWKS are the warriors of the bird world. Fierce, aggressive, usually untamable, with spirit unbroken by imprisonment, they neither ask nor give mercy. Raptores, or Robber Birds, the ornithologist calls them, but I do not think that they deserve this title. A robber, as we understand the term, is one who not only breaks the law but usually does so in the most sneaking, despicable way. But the Hawks obey, they do not break the law, and they do it with no attempt at concealment.

Nature's laws demand that certain forms of life shall live upon other forms of life. Every creature has its special enemies which prevent it from becoming unduly abundant. So it is the Hawks' duty to prey upon mice and shrews, lizards, frogs, birds and other animals to prevent them from becoming so abundant that they would overrun the

world. From Nature's point of view there is no more cruelty in a Hawk's catching a mouse than there is in a Swallow's catching a mosquito. Both are playing the part that is assigned to them. The Hawk's equipment of strong, sharp, curved talons, hooked, tearing bill, and great strength are no more effective than the large mouth and wonderful agility of the Swallow. But the Hawk looks the part; the Swallow does not, and we therefore attribute to the for-



THE POWERFUL GRASPING FEET OF (A) AN OWL, (B) A HAWK

mer a disposition in keeping with its habits and expression.

It is a great Hawk—the Eagle—which we have made the symbol of war, just as we have made the gentle-appearing Dove the symbol of peace. Perhaps if the less obvious characteristics of other birds were as well known to us, the Woodpecker would symbolize industry, the Nuthatch thrift, the Brown Creeper, perseverance, and the Chickadee, good cheer.

Man has been more unjust to Hawks than to any other birds. The motto "give a dog a bad name"

applies even more closely to these winged hunters. Because one kind of Hawk has an undue fondness for poultry, all Hawks are commonly believed to be chicken thieves and the name "Chicken Hawk" or "Hen Hawk" is applied to Hawks at large, without regard to species or habits.

The Food of Hawks

So general is the opinion that all Hawks are destructive to poultry, that, instead of giving these birds a vote of thanks for their services in destroying the small rodents so destructive to our crops, some states have actually offered a reward for every one killed. It is just as though we should treat an ally as an enemy and turn our guns upon him instead of welcoming him with open arms.

The states that passed such ill-considered laws lost not only the thousands of dollars foolishly expended in bounties, but also the services of the Hawks that were killed, and their crops suffered from a corresponding increase in the numbers of mice which were formerly kept in check by the Hawks that had been so unjustly condemned to death.

The warfare against the Hawks (and also their relatives, the Owls) became so serious that the United States Department of Agriculture sent a request throughout the country for the stomachs of

Hawks that had been killed in order that their contents might be carefully examined and its nature learned, not from hearsay, but by actual analysis. Many thousands of stomachs were sent to Washington. Experts devoted several years to a study of their contents and the results proved, what naturalists had long believed to be true, that, with but few exceptions, our Hawks and Owls are among the farmer's best friends. It was found, for example, that of five hundred and thirty Red-tailed Hawks no less than four hundred and fifty-seven, or eighty-eight per cent, had eaten field mice, rabbits, ground squirrels, gophers, and cotton rats, all more or less harmful mammals.

Only three out of two hundred and six Red-shouldered Hawks had committed the crime of chicken-killing for which the law condemned unheard the remaining two hundred and three, while one hundred and forty-two of these proved their value as allies by eating mice and other rodent pests and ninety-two had feasted upon insects.

The Marsh Hawk, Broad-winged, and Rough-legged Hawks had equally good, or even better records, but when we come to Cooper's and the Sharp-shinned Hawks we find the real offenders. Of ninety-four of the former thirty-four had been eating poultry or game birds and fifty-two other birds.

The Sharp-shinned Hawk is too small to catch grown chickens, but it is winged death to small birds. Examination of one hundred and five stomachs of



RED-SHOULDERED HAWK

this little Hawk showed that six had eaten poultry or game birds, and ninety-nine other birds. The Goshawk, a very large cousin of these two Hawks, which comes to the northern states usually in small numbers in winter, also feeds upon other birds and

is most destructive to game birds, particularly Ruffed Grouse. Fortunately this bird is not common, and as we are here concerned only with those species which we may expect to see any winter's day, let us see how we may distinguish the innocent ones from those that are guilty.

We must not be misled by appearances. The large size, habit of perching in conspicuous places, and of soaring in wide circles while calling loudly, has made the Red-shouldered and Red-tailed Hawks familiar figures to the farmer. But the Cooper's and Sharp-shinned Hawks are less frequently seen. They avoid exposed places, slip quickly through the woods, and, as a rule, are quiet. They are smaller, lighter birds than the Red-shoulder and Red-tail, and few people seeing all four together would select them as the criminals.

It is, however, far easier to drop on some unsuspecting mouse than to capture a bird. Watch the Sharp-shin in pursuit of a Robin. With what speed it follows its victim, dashing through the trees, making every twist and turn of the poor bird that is flying for its life, until its keen talons are plunged into its prey.

The heavy-bodied Red-shoulder or Red-tail could not perform this feat. They are built for hunting in the open and, while they may sometimes take a

bird on the ground unawares, they do not, as it were, fly him down.

I have placed these Hawks in the group of "Birds of the Woods," for they all nest in the forests and are true wood-inhabiting Hawks. Still we shall find them also in the fields wherever there are trees in which the mouse-hunters may watch or the bird-hunters hide.

The Red-shoulder and the Red-tail

The Red-shoulder is not quite so large as the Red-tail and has the underparts reddish brown without black markings. Its call is a fierce "Keè-you, keè-you" uttered as the bird sails in wide circles, often so high that he is but a mere speck in the sky. The Blue Jay imitates this call so well that if he did not usually follow it with some notes of his own, one would think a Hawk was near by.

The adult Red-tail may be known by the reddish brown tail-feathers with a single black bar, and the broken band of black markings crossing its underparts. The immature bird has the tail barred and may be mistaken for a Red-shoulder but for the black markings below. This Hawk may best be known by its cry, a high, long-drawn squealing "Kee-ee-ee-ee-e."

Both the Red-shoulder and Red-tail build bulky

nests of sticks, placing them in trees from thirty to seventy feet above the ground. When not disturbed they return to the same nest year after year. The three or four dull white, brownish-marked eggs are laid early in April.

Cooper's and the Sharp-shinned Hawks

In the south, Cooper's Hawk is called the "Blue Darter." So far as color is concerned, the name applies only to the adult bird, which is slaty blue above; but old and young may with equal truth be called darters. With a speed which gives them also the name "Bullet Hawk," they shoot through the air and plunge upon their prey. This is the true "Chicken Hawk." One visit to the poultry yard is very apt to be followed by another, and just as a man-eating tiger acquires a taste for human blood, so does a liking for the tender flesh of pullets doubtless grow upon the Blue Darter.

I suppose it is proper that he should pay the penalty for his raids upon the hen-yard; but how is a mere Hawk to know that the chickens were not placed there especially for him? We spread a lunch-counter with nuts, seeds and suet for the Finches, Woodpeckers and Chickadee and make them welcome guests. Why, therefore, should the Darter not

believe that he was invited to partake of a feast which had been prepared for him?

Contrary to the rule among birds, the female hawk is larger than the male. This sexual difference in size is well marked in the Darter and Sharp-



SHARP-SHINNED HAWK PURSUING A REDPOLL

shin, as our figures(Nos. 9-12) of them clearly indicate. The Sharp-shin is the smaller of the two, but a female of this species is nearly as large as a male Darter. While it is therefore always possible to identify a male Sharp-shin and a female Darter, the male Darter and female Sharp-shin cannot certainly be distinguished in life. Indeed, it sometimes puzzles an expert to name specimens of them, when in the streaked, immature plumage.

Both species, however, without regard to sex, may be told from the Red-tail and Red-shoulder by their smaller, more slender bodies, shorter wings and longer tails. Note how in the other Hawks the folded wings reach nearly to the tip of the tail, while in the Darter and Sharp-shin they do not extend more than half of its length.

Neither cry of pursuit nor scream of victory is uttered by these winged hunters. Perhaps, indeed, we might better call them marketmen, for they hunt to supply themselves and their families with food and not for the mere pleasure of chase.

Their insignificant cackling calls are therefore usually heard only when one approaches their nest. Evidently forgetting then their power of wing and foot, they make no attempt to defend their young other than a weakly uttered protest.

Both build nests of sticks and twigs in trees in the woods, and lay from three to six eggs early in May. Those of the Sharp-shin are bluish-white, spotted or blotched with brownish, while the Darter's are bluish-white, generally unmarked.

THE OWLS

BIRDS OF THE NIGHT

(Figs. 15-18)



THE human-like traits which make birds so interesting to us are usually not evident until we actually become acquainted with them. This is only another way of saying that, as a rule, birds' faces do not reveal their characters; but Owls are exceptions. Any one can see at a glance that they are wise birds. At least they *look* like wise birds, and it remains for us to discover whether Owls actually deserve the reputation for wisdom which they have borne ever since mankind has known of their existence.

We must, of course, always remember that Owls are birds and in our attempt to measure their intelligence compare them, not with man, but with other birds. Doubtless the first thing that will impress us when we make this comparison is that Owls arise at about the time most birds go to bed;

and this difference in habit is so important that it affects their whole lives.

Whether Owls can see as well at night as other birds can during the daytime we do not know; but the ease with which they steer a safe course through the woods and pounce upon a scurrying mouse below in what to our eyes is darkness, gives us some conception of the keenness of their vision. We may well believe, therefore, that instead of being handicapped by their nocturnal habits, Owls enjoy a real advantage over diurnal birds.

While Sparrows, Warblers and Flycatchers, for example, have to compete with scores of others of their kinds, Owls are comparatively few in species and in numbers, and the world at night offers them an abundance of room and a never-failing supply of food.

So, without inquiring further into the habits of Owls, we must admit that, if they are responsible for their night-loving ways, they show no little wisdom in remaining at home during what we may call the rush-hours of the day, and coming forth to hunt only when they can have the world pretty much to themselves.

Two interesting exceptions to the rule that Owls are nocturnal are the Snowy Owl and the Hawk Owl, both of which are active by day. Evidently

the fact that these Owls live in the far north where, in summer, the sun is visible during the entire twenty-four hours and consequently there is no real night, has made it impossible for them to wait for darkness before starting forth on their hunt for food. Indeed, in the fall, when the long winter night comes, these Owls migrate southward to latitudes where the sun can be seen for a part of each day, and although their twenty-fours are then divided into periods of darkness and light, they still retain their habit of hunting by day.

The Food of Owls

The studies of the food of birds made by the Biological Survey in Washington, have proved that mice form the largest part of the fare of Owls. They also eat large numbers of grubs and insects and are, therefore, valuable allies of the farmer.

The Great Horned Owl, it is true, shows an undue fondness for poultry and game, and is therefore not deserving of the protection which should be given our other members of this family. Their records as mousers are clearly shown by the following figures based on examinations of the contents of their stomachs. Thus, eighty-four out of ninety-two Long-eared Owls, seventy-seven out of eighty-seven Short-eared Owls, and seventeen out of nine-

teen Acadian Owls had all been feasting on mice, while of two hundred and twelve Screech Owls' stomachs, ninety-one contained mice and one hundred insects. Unlike Hawks, Owls do not as a rule hold their prey in their claws and tear it into pieces with their bills before eating it; but, if it is not too large, they swallow it entire. By the processes of digestion the bones and hair are formed into oblong wads which are ejected at the mouth.

Hundreds of these matted pellets may sometimes be found on the ground beneath some dense evergreen in which an Owl dozes away the daylight. From them we may not only learn of an Owl's roosting-place, but can tell far more certainly than by an examination of his stomach, the nature of his food. Here we have not the record of one meal, but of hundreds of meals. Only an expert can identify for us all the little bones which we shall find closely embedded in the hair, but to one familiar with the anatomy of animals the more important ones can be distinguished as readily as we could name the letters of the alphabet. Placed together they spell the story of a night's hunting. The white-footed, wood, or deer mouse, the short-tailed meadow mouse, the jumping mouse and tiny shrews may all have been on the bill of fare.

No less than four hundred and fifty-four of these

little mammals, and of some others so rare that no naturalist had ever seen them in the vicinity, were found in two hundred pellets gathered in the tower of the Smithsonian Institution in Washington, where a pair of Barn Owls, a southern species, had made their home.

Even if Owls see as well by night as Hawks do by day, their success in capturing these dull-colored little animals among the tangle of grass and shelter of leaves in which they live is remarkable. I have an idea that, like the hunter waiting for his game to appear on some traveled "runway," Owls may watch over open places for the coming of mice and shrews. Several times, when motoring at night, the light of the automobile has fallen on Owls in the road ahead where they had apparently either just captured their prey, or were waiting for a victim to cross the road.

Both the Hawk Owl and the Snowy Owl are such rare visitors to the United States that we may possibly never see either of them. But the Great Horned, Barred, Long-eared, Short-eared and Screech Owls are with us throughout the year, and the Acadian sometimes wanders southward from the northern border of the United States in winter.

The Screech Owl, although a wood Owl, shows so marked a fondness for the haunts of man that we

may class him with the "Home Birds"; while the Short-eared Owl belongs among the "Field Birds," leaving the remaining five among the "Forest Birds."

Great Horned Owl

They are not numerous, these soft-feathered lovers of darkness, and might forever be strangers to those who did not seek them, were it not for their voices. How the deep, sonorous notes of the Great Horned Owl echo through the stillness of the night! Under favorable conditions I have heard birds calling which were not less than half a mile away. "Whoo, hoo-hoo-hoo, whooo, whooo," he cries, all on the same note, and in a tone which reminds one of a bass-voiced dog barking in the distance. I wonder do the birds and animals on which the Great Horned Owl preys recognize in the ominous tones the voice of their natural enemy?

The ferocious, untamable nature of the Great Horned Owl has won for it the name of "tiger among birds." Sometimes it calls a wild, piercing scream which suggests the voice of an animal rather than that of a bird. I was in the heart of the Adirondacks on my first camping trip, when a Great Horned Owl on a mountainside across the lake uttered this blood-curdling cry. "Panther?" I gasped to my guide. "No, Hoot Owl," he replied.

The Great Horned Owl disappears with the forests. His wild nature requires more than a small patch of woodland for a home; so he is rare or unknown in more settled regions. Able to provide for a family at any time of the year, he does not wait until late spring or early summer, when food is more abundant, before going to housekeeping. The Great Horned is indeed the first of our birds to nest; its two or three white eggs being laid in an old Crow, Hawk, or Squirrel nest as early as the latter part of February. I knew of one nest from which an icicle was hanging while the mother Owl sat on her eggs above. Fortunate it is that the young Owls are born clad in a thick suit of warm, white down.

You are far more likely to hear the Great Horned Owl than to see him; but when seen he may always be known by his conspicuous feather "horns" and large size. The Long-eared, Short-eared and Screech, our only other Owls with "horns" or "ears," are, as our plate shows, less than half his size.

In the Screech Owl these feather-tufts are enough like cat's ears to give this little Owl the name of "Cat Owl," but there is small resemblance between even a cat's ears and the feather-tufts of the Long-eared Owl, which, if feathers must be called either "ears" or "horns," might better be known as Long-horned Owl.

A recluse of cedar swamps and dense evergreens, the voice of this retiring Owl is so seldom heard that no one seems to know much about it. The bird's presence is as often betrayed by the pellets scattered beneath its roost as in any other way.

The Long-eared Owl nests early in April, laying its three to six white eggs in an old Crow, Hawk, or Squirrel nest.

Barred Owl

Next to the Great Horned Owl, the Barred Owl is the largest of our resident Owls. He has no horns, and his eyes are dark brown or black, while his plumage, particularly that of his face, lacks the yellowish brown tints of that of the Great Horned. The voices of the two birds are much alike, but the Barred Owl's is less deep and the hoots of his call are not all on one note. "Whoo-whoo-whoo, whoo-whoo, to-whoo-ah" he calls in tones that go booming through the woods. With a little practice one can learn to speak the Barred Owl's language well enough to be understood by the Owl, even if one cannot understand oneself! Whenever I hear one I always answer him and he rarely fails to come to me, even in the daytime. Perching near where I am concealed, he peers down with such an intelligent look in his dark eyes that I often feel I am talking

to a feathered man rather than to a feathered bird.

Our conversation is made up only of "whoos," "ahs," and "whas," but they are uttered in such a variety of ways that they no doubt possess an equally great variety of meanings. Sometimes we are joined by a second (I almost said "third") Owl, and then indeed the words fly fast and furious as we all talk at once. Occasionally the two real Owls sing a duet; or perhaps I should say a piece together. One utters about ten rapid hoots while the other, in a slightly higher tone, hoots half as fast, both performers ending together with a prolonged "whooh-ah." Rarely their voices rise to a weird, gasping shriek, emphasized at its conclusion like a cry of distress. One night an Owl perched in the low, sweeping limbs of a live-oak directly above our house-boat on the Suwanee River, gave utterance to this hair-raising scream. If a wild-cat had suddenly sprung upon us we could not have been more frightened.

Crows seem to understand the language of Owls even if we do not; and too often my interviews with Barred Owls are interrupted by the black bandits of the air who, sounding their rally call, soon appear in numbers and worry the Owl into retreat, while with a chorus of caws they follow.

The Barred Owl nests in March, laying two to

four white eggs, usually in a hollow tree, but sometimes in an abandoned Hawk or Crow nest.

Saw-whet Owl

Should you see an Owl even smaller than the Screech Owl and without ears you would know that you have added the Saw-whet Owl to your list of bird friends. Poor eyesight by day or ignorance of man and his ways—perhaps both combined—make him the least wary of our Owls and when found in his hiding-place in some dense evergreen we may sometimes touch him before he takes wing.

The Saw-whet owes his name to his notes, which are described as resembling the sound made by filing a large-toothed saw. He nests from the northern border of the United States northward and wanders southward irregularly in winter.

RUFFED GROUSE

A WOODLAND DRUMMER

(Fig. 3)



As the days grow shorter, and the leaves fall and the ground becomes covered with snow and the ponds with ice, we don heavier clothing, build a fire in the furnace, put up "storm doors" and prepare for the biting cold of winter.

The Thrushes, Warblers, Vireos, Flycatchers and other Summer Resident birds have all gone to warmer climes; even some of those we class as Permanent Residents have retreated further south or sought the shelter of protected lowlands, but the Ruffed Grouse asks no mercy of the weather nor any better home in winter than his woodland domain has furnished him in summer.

The slender toes that then so daintily trod the moss and fallen leaves are now bordered with comb-like fringes that, like snowshoes, support him on the soft white carpet of the earth, and leave be-

hind their record of his wanderings. When the deepening snows cover the seeds and berries, he goes to the upper story of his woodland dwelling and changes his diet to buds and catkins. If the night is too bleak to sleep in the open, he flies headlong into a snowbank and finds a warm bed beneath this strange blanket.



THE SLENDER FOOT OF A RUFFED GROUSE IN SUMMER (LEFT) AND (RIGHT) THE FRINGED FOOT OF A RUFFED GROUSE IN WINTER, WHEN THE BIRD DONS SNOWSHOES

With the passing of winter the Grouse joins the band of Spring's musicians. His part is not the pipe of the frogs, the trumpet of the Geese, or the fife of the Meadowlark. The drum is his instrument, and most vigorously does he play his part. *Thump-thump-thump*, he begins, increasing the speed of beats until they run into a muffled roll.

How the bird produces this remarkable sound long remained a mystery. Some persons believed

that he beat the log on which he usually takes his stand; others were equally sure that he clapped his wings on his sides.

It was not until Grouse, raised in captivity, became so tame that they would drum almost on one's knee, that it was learned that their stiff, rounded wings struck only the air. The startling *whirr* with which a Grouse springs into the air from beneath one's feet is also caused by the quick strokes of his concave wing-quills beating the air.

The Grouse's tattoo is his love song. With the coming of May we more rarely hear it rolling through the woods, and then may know that his mate is on her leaf-lined nest at the base of some tree, sitting on ten or a dozen pale buff eggs.

The Grouse chicks, like those of their relative, the barnyard hen, can run about as soon as the thick covering of down in which they are born is dry. They are true feathered brownies, and have the power of becoming invisible while your eyes are upon them.

Walking through the woods in June we come suddenly upon a mother Grouse and her family. Does she desert them? Not a bit of it! Thought of flying possibly never enters her head. She thinks only of those little balls of down which a moment before were running so actively about her. At any cost

they must be saved. But how can she do it? She is not strong enough to fight and they are too weak to fly. The use of force being therefore out of the question, she resorts to strategy. From a trim, graceful bird leading her brood of youngsters over the leaves she becomes in a twinkling, a poor, maimed, wing-broken, whining creature who, fluttering painfully before us, can barely keep beyond our reach. We will note, however, that she *does* keep beyond it. **I**f we increase our pace she hastens hers. Finally, when we are just about to touch her, she drops her rôle as quickly as she assumed it, regains, as if by a miracle, her power of flight, and goes *whirring* off through the woods. Then we discover that we have been led yards away from the place where we first saw her and her downlings.

Meanwhile what has become of them? We may remember now that we caught only a glimpse of their hurrying forms and then they magically disappeared. Let us, if we can, return to the spot where we unwittingly brought such confusion into their lives. Shall we find them calling plaintively for their mother? Not a note do we hear, nor do we see a bird. We look carefully over each foot of ground and at last see one squatting on a leaf head down, and so motionless that he might be a leaf himself. Perhaps we may discover a second and a third; but

although we know the whole family of ten or a dozen is within a few feet of us, most of them will remain invisible and not one will move.

At the first sign of danger the mother called to them something in the Grouse language which means "scatter and squat." Disobedience with the young of all wild creatures often means death. Obedience is, therefore, instinctive, and these little Grouse were now waiting for the soft cluck which would tell them the danger was past, when each one would spring into life and seek the sheltering wings of its parent.

THE GROSBEAKS

OUR MOST DISTINGUISHED WINTER VISITORS



It is a great blessing to have good neighbors whom we may see daily and learn to know and to love. Life would indeed be dreary without their congenial companionship, and our pleasure in their society grows as we form associations and share experiences which give us a past in common.

Nevertheless, we always eagerly welcome the visitor from distant lands. He brings us news from strange parts of the earth which through him for the first time become real places and not merely names upon a map.

So though we must not tire of Chickadee, Nuthatch and Downy, of Song Sparrow, Flicker and Blue Jay, who, as the years pass, become increasingly dear to us, their daily visits never bring the thrill which passes through us when we see some rare bird visitor from a remote region.

It is the especial charm of making friends with

the birds, that we never know to whom we will be introduced next. During the migration months in spring and fall when feathered travelers are arriving and departing in an endless procession, our list of acquaintances grows so rapidly, that if we did not record their names, we should not remember them when we met again.

But there is not a month, yes, not a day in the year, when we may not chance to see some bird we have never seen before. This ever present possibility keeps us always on the alert. Even in mid-winter we should maintain a constant lookout with the hope that our vigilance may be richly rewarded—for this is the season of the Grosbeaks—Pine and Evening.

At any time of the year they would make a noteworthy addition to the bird-life of the season, but coming at a time when our feathered population is at its lowest mark and when birds of any kind mean more to us than when they throng every field and hedgerow, these large, handsome, strikingly marked Finches are as welcome as they are conspicuous.

About them, as about the Crossbills, hangs the fascination of mystery. No one can say when they will come or when they will go. Absent entirely some years, they may be abundant others; and when they do come they show such entire confidence in

our good-will that we may form the most delightful intimacy with them. While, therefore, they have been classed under "Forest Birds," they will come freely about our homes if food is to be found there.

Pine Grosbeak

(Figs. 53, 54)

The Pine Grosbeak is especially fond of the berries of the mountain ash and staghorn sumach, but it also feeds upon cedar berries and the buds of pines and spruce. Its call is clearly whistled and strongly reminds one of the notes of the Yellow-leg. To this day I can clearly recall the first time I ever heard the note of the Pine Grosbeak. At once I answered and within a few moments the bird alighted on the ground almost at my feet. That, indeed, was a memorable experience.

The Pine Grosbeak's song I have never heard, but it is said to be prolonged and melodious. We may look for this robust, hardy Finch any time between November and March, but if it has not been reported before the holidays it is not likely that we shall see it at all during the winter.

The male does not acquire its red plumage until its second year, and meanwhile wears a dress like that of the female.

The nest of twigs and rootlets is placed in a coniferous tree somewhere in northern New England or Canada. The pale greenish blue, brown-spotted eggs are laid in June. Very little is known of the birds' nesting habits.

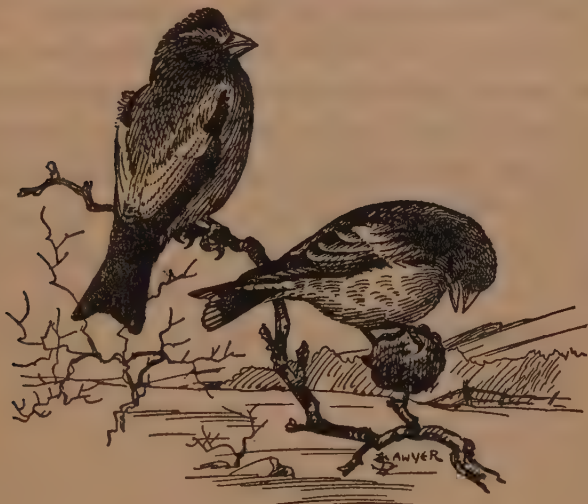
Evening Grosbeak

Beyond question our most distinguished winter visitor is the Evening Grosbeak. Until recent years it was so rarely seen east of Wisconsin and Illinois that few bird students could claim the honor of its acquaintance, but for the past eight years it has come to us more frequently and in greater numbers than the Pine Grosbeak, southern New Jersey being the most southern point from which it has been recorded.

About the size of the latter birds, the males have the forehead yellow, crown black, back olive-brown, underparts yellow, the wings and tail black, the former marked with white, while the female is brownish gray, tinged with yellow below and on the nape, the wings and tail much as in the male.

The Evening Grosbeak is usually seen in flocks of from six to eight to as many as sixty birds. They feed mainly on the seeds of the box elder, maple, and buckthorn, but also evidently acquire a taste for sunflower seeds. By placing a supply of these seeds

first under the buckthorn tree in which Grosbeaks were feeding, a writer in *Bird-Lore* for December, 1917, soon induced a flock of thirty birds to visit her window-sill, where they disputed among themselves for the privilege of feeding from her hand.



EVENING GROSBEEKS

Surely no bird-lover could be accorded a higher honor! When perched in the trees awaiting their breakfast, the constant chirping of the birds sounded like the jingle of small sleigh bells. Sometimes they sang a beautiful caroling song and occasionally uttered a soft throaty trill, like a Bluebird's note.

From February to April these birds were almost

daily visitors to the table which was always spread for them. Then they disappeared. Where did they go? No one knows. Pine Grosbeaks have been found nesting all the way from Nova Scotia to Alaska, but during the summer Evening Grosbeaks are rarely seen east of the Rocky Mountains. Unless, therefore, we should discover them nesting in some remote portion of the great evergreen forests of eastern Canada or the northern United States, it is evident this handsome gold and black Finch has crossed the continent to be our guest during the winter. Certainly after so long a journey he deserves the best entertainment we can give him. Let us make his stay so attractive that he will be tempted to return to us every winter.

THE CROSSBILLS

THE CONE-EATERS

(*Figs. 49-52*)



OME winter day you may be surprised by seeing what at first glance looks like a flock of red and green Paroquets climbing about the branches or hanging to the cones of a spruce or pine. Then you will

remember, perhaps, that the only Paroquet we ever had in North America is now practically extinct, and that, in any event, we should not expect to see these birds of southern climes in our northern winters. The birds, like most visitors from the far north who know little of man and his ways, are so tame that you can approach them closely, and may even pick one off the tree as you would the cone on which it is feeding. You will, therefore, have no difficulty in seeing the peculiar form of the bird's bill with its singularly crossed tips; then if you have looked over the list and pictures of birds which may visit

us during the winter, the name "Crossbill" will probably at once occur to you.

Should you have cone-bearing trees about your home, you are just as likely to see Crossbills there as in the pines, spruces or hemlocks of a distant forest; but cones they must have, for on their seeds they feed almost exclusively.

No one can say when the Crossbills will come. Years may pass without one being seen; then, some autumn, the country will be overrun with them. At once the weather-wise will predict an unusually severe winter under the belief that the birds have been driven south by exceptionally cold weather. But given an abundance of food and it's little the Crossbills care about the weather. It is not low temperature, ice and snow that makes them desert their usual winter quarters in the coniferous trees of northern New England and Canada—it is hunger that sends them south.

The coming of Crossbills is not, then, a sign of approaching cold, but an indication that the crop of cones, on which they are dependent for food, has failed.

The Crossbill's bill looks as though it were deformed; but here, also, we must not form an opinion too hastily. Watch him force it between the scales of the spruce cones, and with a dextrous motion twist



AMERICAN CROSSBILL.

Length, 6·20 inches. *Adult male*, dull red ; back brownish ; wings and tail blackish. *Adult female and young*, greenish ; back more or less mottled with brownish ; the under parts grayish.

PINE GROSBEAK.

Length, 9·10 inches. *Adult male*, rose-pink ; back brownish ; lower belly gray ; wings and tail brownish black. *Adult female and young*, gray ; crown, upper tail-coverts, and breast washed with deep yellow.

them off to secure the seeds at their base, and you will at once see that it is an excellent tool for an operation of this kind. The sight or sound of these falling scales may sometimes be the first sign we have of the birds feeding above so quietly that we should have passed them had we not seen these "chips from their workshop."

Many seeds fall with the scales, and on moist or rainy days, when the cone-scales are so tightly closed that they cannot readily be forced off, the birds frequent the ground to gather the crumbs, as it were, which have fallen from their table on the dry, sunny days when the scales were invitingly open.

Like the Paroquets they so much resemble, Crossbills chatter in low tones to one another while feeding, and again, like Paroquets, they all take wing together, uttering a sharp clicking note as they go. The only song I have ever heard was a short, and not loud warbling, but they may reserve their best efforts until they return to their nesting ground in the north; this may be in March, or the birds may remain with us until May, for the Crossbills are as irregular in their going as they are in their coming.

Nesting time with the Crossbills ranges from March to June. The nest is built of twigs and grasses in an evergreen. The three or four eggs are

pale greenish, spotted with brown and lavender about the larger end.

The Red or American Crossbill is much the commoner of our two species. It spends the summer not only in the north, but, in the higher parts of the Alleghenies, it nests as far south as North Carolina.

The White-winged Crossbill may be readily known by the marking from which it receives its name; while that of the adult male, as our figure shows, is more rosy than that of the Red Crossbill. The red plumage in both species is not gained until the second year, and during the first year of its life the male wears a plumage like that of its mother.

WINTER WREN

A WOODLAND SPRITE

(Fig. 58)



VERY one who has offered it a home knows the House Wren, for he rarely fails to accept our hospitality, but comparatively few people have met his little cousin who comes to us in October, when the

House Wren goes south, and remains until April, when the House Wren returns. Winter Wren, *we* call him, though in northern New England and Canada he is a Summer Wren. But at all times he is a Wood Wren rather than a House Wren.

Fallen tree-tops or brush-piles in low wet woods are his chosen haunts. From such safe retreats he greets us with a rather nervous, impatient "chimp-chimp," much like the call-note of a Song Sparrow. With tail pertly pointed upward, or even forward, he jumps in and out and bobs up and down, all the time evidently as much interested in us as we are in him.

It is not alone his color which makes him a true Brownie among birds, a quaint little wood sprite with whom we would be glad to make friends. But wholly unlike his cousin, he evidently has small use for mankind and one can imagine him saying: "Well, well, what is it you want? I really haven't anything for you, and would be quite as well pleased if you would go on about your affairs and leave me to mine."

It is a pity that this diminutive Wren is so unsociable, for he is a rarely talented songster, whose rippling, trickling melody brings delight to every one who hears him. This song he reserves for nesting time, when in some snug nook in the roots of a tree he builds a home of twigs and moss and lines it softly with feathers.

The eggs number from five to seven and are white, usually finely speckled with reddish brown.

PIONEERS FROM THE SOUTH

CAROLINA WREN, MOCKINGBIRD, AND TUFTED
TITMOUSE



THE pioneers among birds, like the pioneers among men, are hardy, venturesome individuals who can withstand the hardship and exposures of life in lands beyond the regions usually inhabited by their kind. The ability of any species of bird to extend the limits of its range depends upon its possession of pioneers and their success as an advance guard in entering and establishing themselves in a new country.

A species, therefore, does not occupy new territory by advancing in force, but by gradually forming outposts, from which, if conditions are favorable, the increase in population gradually fills up the intervening areas.

The Carolina Wren, Mockingbird and Tufted Titmouse are good examples of bird pioneers. All three are southern birds which have been slowly

advancing northward and which are represented beyond the limits of the country where they are common by more or less widely separated outlying settlements.

The Tufted Titmouse

The Tufted Titmouse looks so much stronger than his cousin, the Chickadee, that of the two one would expect him to live much the farther north. But the Hudsonian Chickadee lives northward to the very limit of tree-growth in Labrador and the bleak interior of British America, while the Tufted Titmouse is rarely found north of the latitude of New York City.

With the coming of winter this species usually retreats a little from its more advanced stations and it is during these short journeys in the spring and fall that one is more apt to see it—or perhaps one should say hear it, for the Tufted Titmouse is an inveterate whistler and is more than apt to announce his presence by a loud, clear “peto, peto, peto,” which can be heard for a long distance and which the bird seems never to tire of repeating.

Doubtless this call is the equivalent of the Chickadee's tenderly whistled “phœbe” call, though it is

far from resembling it, in either form or the sentiment it expresses.

Should we follow the whistler and discover him actively exploring the branches, he might greet us with a rather hoarse "dee-dee-dee," which would at once betray his relationship, while his prominent crest, soft gray colors and black frontlet would further serve to identify him (see initial at the head of this chapter).

The Tufted Titmouse sometimes visits our lunch counters, but he is far from showing that confidence in man which makes his black-capped cousin such a cherished bird friend.

The Carolina Wren

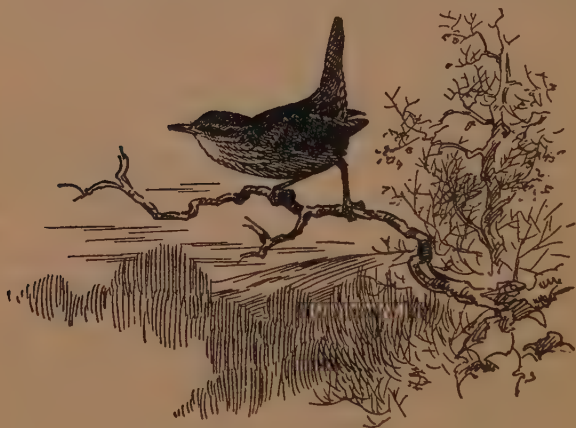
The regular range of this fine large Wren extends to about the latitude of central New Jersey, but it has succeeded in planting outposts as far north as Naushon Island, off the Massachusetts coast, and Gardiner's Island at the eastern end of Long Island.

On the sheltered, eastern slope of the Palisades at Englewood, New Jersey, I have seen as many as twelve Carolina Wrens in an hour, more than one usually sees in this time in the heart of their range.

This species is not migratory and these pioneers must withstand the most severe winters of the coun-

try in which they have settled, if they are to advance the boundaries of their range. This fact places a trying test on their vitality and endurance, and only too often they are called upon to pay the penalty which falls to the lot of the leader.

During a succession of favorable years they thrive



CAROLINA WREN

and multiply and one hears of them from places at which they had not been previously seen. Then comes a winter with exceptionally heavy snowfall and with storms of ice and sleet that prevent the birds from securing food, when the little colonies at the outposts die of starvation and the ground gained by generations is lost in a single season. Only the hardiest individuals survive and it is their progeny

which takes the leading part in regaining the lost ground.

Thus these pioneers gradually become fitted to endure hardships which more southern members of their species could not endure, and the range of their kind is slowly extended.

Every one who knows the Carolina Wren will wish him good fortune in conquering new territory. His activity and his loud, ringing, musical voice make him a prominent and welcome figure in the bird life of the community he inhabits. He looks half again as large as the House Wren and is brighter, more cinnamon in color, with a conspicuous whitish line above the eye. His song is in no sense a trill but consists of a variety of clean-cut notes, most of which may be closely imitated by a skillful whistler. His alarm note is a loud, rolling *chir-r-ring* which resembles the call of a tree-toad as well as that of the Red-headed Woodpecker; and if one could whistle the words "tea-kettle, tea-kettle, tea-kettle," the sound produced would resemble one of this Wren's most characteristic calls.

In the South the Carolina Wren at times lives about dwellings, but in the North he is usually a bird of the woods, frequenting fallen tree-tops and thick undergrowths.

Mockingbird

All that has been said of the pioneering habits of the Carolina Wren applies also to the Mockingbird. We associate this famous songster with magnolia, yellow jessamine and palms, but it lives as far north as Massachusetts, where a few venturesome individuals spend the entire year, for, like the Carolina Wren, the Mockingbird is not truly migratory.

The only bird with which we may confuse the Mockingbird is the Shrike, but the resemblance is only superficial and when one is familiar with both, there is small possibility of mistaking one for the other. The Mockingbird is more slender and has a much longer tail; there are no black markings about its head and when it flies the white markings in its wings are more conspicuous, while if one is near enough, the rather long, slender bill of the Mockingbird can not be mistaken for the stout hooked weapon of the Shrike.

I recall a Mockingbird which one November appeared near the Museum of Natural History in New York City. Its fare consisted mainly of the berries of a Virginia creeper which covered some rocks in the museum grounds. This was before the day of the Starlings, which now make such short work of

the yearly crop of these berries, and the Mockingbird's supply of provisions might have lasted him throughout the winter if it had not been covered by a heavy fall of snow. The weather was unusually



MOCKINGBIRD

severe, the mercury falling below zero, but the Mockingbird discovered a new source of food in the berries of the privet and seemed not to suffer from the cold. Strange it was to hear his sharp, kissing alarm-note, which I had long associated with more southern scenes, mingled with the voices of children

who were coasting merrily past the tree in which he was perching.

Food, therefore, is the all important thing, and as long as birds are well-fed, even those which are not accustomed to cold weather can withstand a surprisingly low temperature. I have known of a number of Mockingbirds which survived a northern winter as guests at a bird-lover's lunch-counter. It is not often, however, that we are honored by such a distinguished bird visitor.

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